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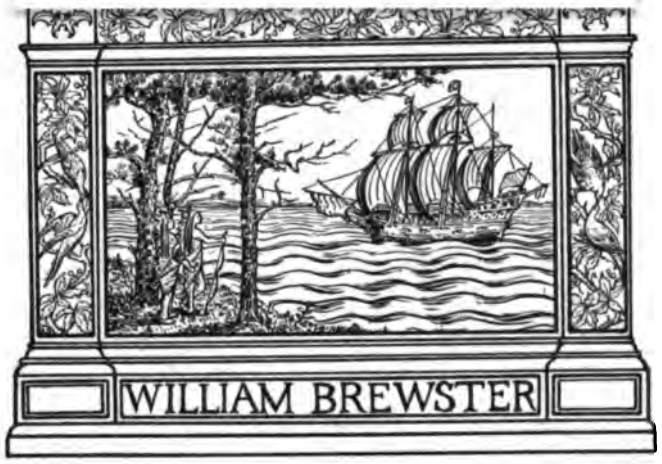

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NATURE

A Weekly Journal for the Gentleman Sportsman, Tourist and Naturalist.

VOLUME I. NEW YORK, SATURDAY, NOVEMBER 2, 1889. NUMBER 1.

NATURE,

A Journal for the Gentleman Sportsman, Tourist and Naturalist.

Contributing Editors:

WILLIAM C. HARRIS. CHARLES HALLOCK.
CHAS. BARKER BRADFORD. J. CHARLES DAVIS.

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NATURE PUBLISHING COMPANY,
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"Ye who love the haunts of Nature,
Love the sunshine of the meadow,
Love the shadow of the forest,
Love the wind among the branches,
And the rain-shower, and the snow-storm,
And the rushing of the great rivers,
Through their palisades and pine trees,
And the thunder in the mountains,
Whose innumberable echoes
Flap like eagles in their eyries;—
Listen!" *Longfellow.*

IN accordance with the above sentiments, so congenial to those to whom his glowing apostrophe is addressed, the subscribing editors herewith open out their new volume and utter their appeal. We bespeak a willing ear, if not a ready pen. The Book of Nature is ever full of ecstacy and beauty. Its leaves turn toward the sun. Its music is Æolian. Its fountain is pellucid and inexhaustible. From its sources we have to draw and drink refreshingly. Perchance some of those who read us—some of those who tread the wooded paths which Thoreau so much loved, and which Longfellow never tires of describing with his pen, may be persuaded to join their hands in ours, and so saunter on together. There *are* days in the autumn when one feels as if he would care only to lie down in the crisp leaves, with the Babes, and let the birds cover him. His soul would rest in Nature's lap and spend its energy in this passive mood. But editors must *work*. It is a blessed thing if they can enjoy while they work. It has been well said that there are but few great nature lovers, but there have been a sufficient few to stamp their personality on the regions which they have animated. Thoreau's country, simple as it is, plain in its features, and rough in its contour sometimes, is lovable because Thoreau has been there. We love the sods his feet have pressed. The wildwood precincts are hallowed by his memories. Mario once had a voice, and the cat-bird which sings in June squawks in August. Nevertheless we love them for what they were and for what they have made their little spots of earth. A quiet bit of country under an observant eye can be made to yield a store of happiness, and when we have the vast Arcanum of Nature spread out before us, who dares gainsay that the editors shall not make a readable weekly magazine? A vista opens down the forest lanes. Methinks we hear the muffled drum-beat of the partridge in the distance. "Listen!" We feel an impulse to proceed.

THE true sportsman—not the murderous, law-breaking market-game supplier, who wantonly butchers game in and out of season for money, nor the fellow who "shewets because it is quite the thing, ba jove," but the true sportsman who hunts and angles for the pleasures of the chase itself and the natural beauties of the out-door world—studies and follows the game law as much as he studies and follows its subjects.

—

THE generally bright little *Evening World* in its issue of October 17 has a column of short stories of field sports. Here are a few of the cockney errors for practical sportsmen to laugh over. One of the writers says he heard a noise in the bushes and fired in the direction of the sound. This is, indeed, a chivalrous sporting incident. Another writer contributing to the same column says he used in killing a deer two and one-half ounces of duck shot. Further down in his yarn he says the shot was No. 8. Some persons may use No. 8 shot on duck, but it can not be called duck shot any more than No. 10 can. The copy-reader should have marked the number down just half. And he used two and one-half ounces! If so, he must have had back of it at least *seven* drams of powder and in order to burn that amount his gun must have been a small cannon and his arm made of steel. The contributor of the last yarn says he called his dog and started for moose. We shall next hear of the daily newspaper sportsmen going for buffalo and elephants with the dog.

—

SINCE the publication of that charming work, "The American Anglers' Book," by Thaddeus Norris, issued in 1864, we have not had an exhaustive text-book on our native fishes. Norris was the first American writer on the subject, but he treated of only sixty-four species—delightfully, to be sure, yet, with the exception of the salmon family, in a somewhat brief and unsatisfactory manner. Genio C. Scott followed in 1875, but he alludes to but forty-one fishes, and does his work in a sort of perfunctory style that is neither pleasing nor conclusive. In 1887 the issue of Hallock's "Sportsman's Gazetteer," which, while not strictly an angling or ichthyological work, was certainly an advanced step in the literature of both, as the talented author covered the field with much more intelligence and research than any of his predecessors. Brief treatises on particular species of fish have appeared from time to time, and so far as they went, they have answered a good purpose, particularly Dr. Henshall's book on the black bass, which, barring its scientific aspirations, is certainly the best of its kind. During the last decade, so broad and rapid has been our progress in practical ichthyology, that in the new work announced by Mr. Wm. C. Harris, "Fish and Fishing in America," advance sheets of which lie before us, he will include monographs and illustrations of over 200 fishes that are caught on hook and line in American waters. Mr. Harris is the editor of the *American Angler*, now in its seventeenth volume, and has devoted many years not only to the recreative art of angling, but to the practical study of the subject on which his book will treat. We congratulate the fraternity of anglers on the delightful prospect before them in the promised work, of which the editor of a prominent journal aptly says: "The appearance of Mr. Harris' book will mark a new era in the history of American angling literature."

—

A NEW expedition to the North Pole, differing in conception from all that have gone before, is being prepared by Dr. Nansen, a Norwegian. The doctor has $100,000 at his disposal, publicly subscribed, and he says he is not going to turn back. He will go as far North as he can by ship and then push on with small boats and sledges without establishing supply stations. This looks more like attempted suicide than scientific enterprise.

—

WHEN you once tell your dog to do anything, make him do it, but be sure he first knows what you are talking about.

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NATURE'S REVENGE ON GENIUS.

"God hath made man upright, but they have sought out many inventions."—*Eccles. 7-29.*

"Then they provoked Him to anger with their inventions, and the plague broke in upon them.—*Psalms 106-29.*

Nature has ever been most liberal and beneficent to the human race. In the Edenal day's of man's uprightness, the primitive Garden supplied his every want. Nothing was left to be desired. He was supremely content. Even now in the latter days Nature's lap is more than full. The measure of her variety and abundance is beyond the limit of man's ken. But, with the increase of knowledge that followed "the fall," there have come inordinate desires; and this insatiate longing is the fixed penalty of primitive disobedience. Unlike the thirst of Tantalus, it does not remain unsatisfied, but the misery and suffering are rendered more intense because of the human capability of accomplishment. In full consciousness of his strength and God-given faculties, man's constant endeavor from the beginning has been to neutralize that penalty, and to restore by his own effort that blessed pristine condition when contentment left nothing more to be desired. His mighty intellect enables him to work out successfully economic problems which he undertakes, and to satisfy his wants and supply his deficiencies by multifarious ingenious inventions. There seems to be no limit to his scope and capacity, but he never attains the desired ultimate! Each success only seems to remove the desideratum further off; for, with each desire fulfilled, new wants arise, like hydra heads, to stimulate his energy and test his genius. Nay, more; new penalties and distresses persistently and inexorably follow each new invention, and that which man believes to be for his amelioration inevitably bears a satellite of evil in its train. Fresh calamities and new diseases not only come to view, but they are discovered to be actually produced by the novel appliances which have been regarded as benefits and wonderful improvements. Household conveniences beget unexpected annoyances, rapid locomotion involves fatalities, and mechanical contrivances to reduce labor impoverish multitudes while they benefit the few; and not only economic contrivances, but æsthetic devices exert a reflex influence upon the health and comfort of those who employ them. The world of fashion becomes the vestibule of the cemetery. Indeed, it may be stated as a postulate, on general principles, that the ratio of evil is a hundred to one of good accomplished by man's inventions, either in respect to the intrinsic properties of the machines invented, or to the population upon which they directly act. So that, while man apparently is working out his own salvation and benefitting himself, each effort is actually involving him more inextricably in the meshes of the Divine penalty.

"God made man upright;" but since he has fallen, no other power can set him up again. "Of ourselves we can do nothing."

But man's progressive works are not only destroying himself, but they are hastening the destruction of the Earth, in whose ultimate fate mankind is commonly involved, according to the Scriptures. It may well be questioned whether, in view of the startling and unforeseen consequences of scientific success which have changed the aspect and economy of the entire globe within the past fifty years, we have not overstepped the moral bounds of science by perverting the knowledge which Man came into possession of surreptitiously when he ate of the "forbidden fruit." We have not only experimented with the visible forces of Nature, but, like Saul, have had dealings with the occult. When Benjamin Franklin first called down the lightning from the sky he was accused by the superstitious or reverential with "tempting the Almighty." Now we handle the subtile element as if it were inert matter, and we impress it into our nurseries as a toy for the children! We tap the bowels of the earth and subject to our domestic use the vapors which formed primordial chaos; we jar the earth with giant explosives and start the mountains in motion; we breed earthquakes and marvel at the results; we experiment with the volcano and the geyser, the mysterious medicine spring and the poisoned valley, and toy with the weirdest phenomena of Nature as if they were familiar spirits. We have builded a Tower of Babel at Paris, and we have phonographed the breath of life so that the dead may speak years after they have departed from the earth, setting aside the decrees of the Almighty and provoking the laws of Nature. For years we have been attempting to *make water burn*, perverting the Divine economy to the economy of Man, and reversing the purposes of the Creator; and as soon as ever the effort is crowned with success, the destruction of the world is no longer a question of centuries, but of years. At present our most dangerous pet is electricity—in the telegraph, the street lamp and the telephone. We have introduced electric power into our simplest domestic industries, and we have woven this most subtile of agents, once active only in the sublimest manifestations of Omnipotence, like a web about our dwellings, and filled our atmosphere with the filaments of death. Already the conservative public has taken the alarm, and it has become our urgent duty, in the interest of personal safety, to clip the pinions of the winged messenger and draw its claws. Measures are in order to undo the mischief as rapidly as possible and to get back to as safe a condition as we were before we took this active and relentless agent into our intimate employ. It is urged that electric lighting is not essential to the public comfort. It is not a necessity but a luxury. By abolishing it we reduce our danger appreciably. The telegraph is essential to rapid intercommunication in this age of unexampled business activity, and will be retained, but its operation must be subjected to proper safeguards, of which the subway is perhaps the most effective. The telephone is the most dangerous of all because it enters into every dwelling. Its interminable network of wires is a perpetual menace to life and property. In its best performance it is only a convenience. It was never a necessity. In a multitude of cities its service is unsatisfactory and is being dispensed with. It may not be expedient that it should be wholly abolished, but its operation may be so curtailed and systematized as to render it comparatively innocuous. Instead of permitting its introduction into houses indiscriminately, telephone stations might be established, when desired, to embrace districts of six blocks square, thirty-six blocks inclusive, through which messages may be transmitted. It is seldom that there are cases of such urgency to customers as to make the extremest distance within the district a hardship to travel. In a city of the size of New York the number of stations would be restricted to no more than four hundred, and the difference between the comparatively small number of wires required for the transaction of business on that basis and the incalculable number now in use, would not only be immense, but the danger would be reduced in proportion. The dividends of the electrical companies would be naturally diminished thereby, but the grievance would not affect the general public, and the "plague" would be averted. We are to consider, in this marvelous period of scientific progress and intellectual advancement, not so much what we do and the quality of our achievements, as the reflex influence of what is done and how it reacts on ourselves.

Charles Hallock

THE SENSES OF FISHES FROM AN ANGLING STANDPOINT.

The subject of the mental and emotional capacity of fishes is the cause of much curious comment and speculation among angling naturalists, who do not willingly consent that the class *pisces* shall be placed upon a plane of intelligence below that of the insects. The belief that fishes possess qualities which reach a standard beyond the instinct of self-preservation has recently gained in strength and interest, owing to the increased facilities that fish-culture has given us for observing their habits. Seth Green, the Nestor of fish-culture in America, believed that fish talked to one another; and the idea is by no means an extravagant one.

It is conceded by naturalists that certain insects and many of the lower animals have the power of imparting mutual intelligence by processes unknown to us. The little ants hobnobbing with each other, the cooing dove wooing its mate vocally, the hen clucking her brood under protecting wings, are familiar instances of vocal intercourse among insects and birds; and no one who has watched the minnows of a shallow pool, or those in an aquarium, has failed to see equally sure indications that fishes have a way of their own in communicating with each other. They dart up to one another, put noses together for a moment, and then dart off again with an air as much as to say, "All right."

"Old Eschylus, in one of his poems, calls fish 'the voiceless daughters of the unpolluted one;' but many of the ancients and moderns testify to the utterances of fish. Pliny, Ovid, and others tell us of the *Scarus* and its wonderful powers of intonation. In the days of old Rome certain fish were said to have a regular language, 'low, sweet and fascinating,' and the Emperor Augustus pretended to understand their very words. We have all heard, or heard of, the various sounds of the gurnards, of the booming of the drum-fish, the grunt of the croaker, weakfish and others. The grunt-fish of the Gulf of Mexico is said to express discontent and pain, and when touched with a knife fairly shrieks, and when dying makes moans and sobs disagreeably human. Take it all in all, we cannot but believe that fish have the power of making intelligent

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communication to one another, mouth to mouth, and we nave frequently noted, or thought we did, a kind of knowing look about their eyes which led us to credit them with looking unutterable things."

The scientists tell us that in many fishes no trace exists of an organ of hearing; that the tympanum, its cavity, and the external parts of the ear, are entirely absent; that in others this organ is only imperfectly developed, and that in the remaining few, such as the shark, the shad, herring, and others, there is an odd connection between the organ of hearing and the air bladder. With these crude facts before him, the ichthyologist leaves the angler to work out the answer to the question, "Can fish hear?" which is a most practical one to the careful angler in his pursuit of the educated game fish of our inland waters. We sum up briefly the conclusions of an old black bass angler on this subject.

Fish hear no sound originating in the air.

Place a cannon upon an India-rubber carriage, sufficiently large and elastic enough to deaden, when fired, all concussion upon the ground, and Mr. Fish, after the explosion, will be as placid in his pool as a *gourmand* after dinner.

But, step as lightly as one may upon the margin of a stream, and the fish will scatter like shot from the shallows where they are feeding or frolicking. The larger the fish and the lesser the depth of water, the greater and wilder the scattering will be.

Security seems to lie with them in the relative depth of the pools, as the step of the angler only disturbs them in a foot or two of the water. A fish lying in a hole three or four feet deep, close to the banks, is undisturbed by any ordinary concussion.

Again, any concussion originating in or upon the bed of the river or below the fish, does not appear to disturb them. This was verified by this old angler one day upon a large bass which he saw lying motionless within a foot of the stake to which the camp boat was tied. The water was about four feet deep. He struck several successive hard blows upon the top of the stake, which protruded about two feet out of the water, without causing a flirt of the fin in the fish below.

Our angler at once concluded that the bass could not hear the noise made by footsteps upon the bed of the river, when wading in the stream, and, as the jolly fins could not hear the conversation originating out of the water, anglers may indulge in social chat and pleasantries whenever inclined, taking care, however, to be always on the safe side, by not becoming too boisterous in their discussions or hilarity.

"Boys," said a fly-fisher on one occasion, "what fools these bait-fishers are to put their comfort in a straight-jacket when they go a-fishing. Some old fellows won't let you whisper in the boat, and are as querulous and over-cautious as my grandfather was whenever he had an attack of the gout. He would lie flat on his back in bed, with his gouty foot propped up on a pillow laid across a chair, placed bottom upward, and in this position would centre and strain his eyes and fears upon the knob of the chamber door, which was no sooner turned upon its axle than he was heard crying out with prospective pain, 'Watch out for my foot.'"

"It is just so with these old bait-fishers. A motion of your lip, although voiceless, and they would cry out (if they dared), 'Watch out for my coming bite.' They are right in thinking that the least motion of the boat is apt to frighten the fish, but 'I won't go home till morning' by a dozen bass voices is less disturbing to a pool or a bank than the twitching of a toe on the bottom of a boat."

Anglers generally agree on the subject of the sense of sight in fishes. A fish can see in water but not out of it.

The shadow of a split bamboo rod thrown across a pool will create in a fish the same skittishness as would be caused by an elephant browsing upon the bank.

A passing cloud over a shallow and pellucid pool protects the angler and puts another fin or two in his creel, where a moment before each cast of his drove the fish to deeper pools or behind protecting rocks.

An old angling friend once said to me that fish were like ostriches in some of their ways, notably in that they seemed to feel safe when their noses were hid behind a tuft of grass or in the crevices of a sunken rock.

"Fish facing the sun, and forget not this rule, even when the twilight is over the waters, by casting toward the west," was the law enacted by his knowledge, based upon experience, of the effect of shadows upon the wary fins, who are more startled by unusual appearances on the surface of a pool than they are by strange things below.

Vision and hearing in fishes being the senses most important to the angler in his water sports, those next in value are smell and taste. The possession of these by fish seems to be a disputed point. They have evidently taste in a modified degree, as they will reject the artificial lure if the barb of the hook is not immediately imbedded in their flesh, but on the other hand, they will take a leather or rubber imitation of the natural bait with as much gusto as a live minnow or bug—hence the question is a see-saw one.

Of course, among angling naturalists, the gift of the senses is, or at least they think it should be, confined to game fish, as they cannot imagine any dispensation of Providence that places the ignoble catfish or the snaky eel upon the same plane with the salmon, trout and bass.

Fish, no doubt, in common with other animals, have the instinct of danger developed almost to the quality of reason; and it is no bar to the truth of this to argue that, because a fish will take the bait with a hall dozen broken hooks in its mouth, it follows a bruitish appetite that is blind to danger; for, look you, be ye an angler or a butcher, that stomach of yours is death to you every day of your life; that smoking dish, be it a red herring or canvas-back duck, is causing you to make rapid strides graveward, and you know it; and yet you gorge yourself every day upon your favorite dish.

It ill becomes a man to argue that, because an animal cannot control its appetite, it has not the lordly gift of reason. To sum up:

Can a fish taste? Certainly—he spits out his artificial bait.

Can a fish smell? Aye, there's the rub; yet why the anointed lures so prized by old anglers and many modern ones?

This fact, however, is sure: fish are susceptible to anger and jealousy; for we have seen them fight, and we all know how tiger-like in combat salmon and trout are on their spawning beds.

Wm. C. Harris

A FOREST EPICURE.

Have you ever visited the lakelands of Canada? Have you tramped through the silent arches of the primeval forest and filled your lungs with the rich, resinous perfume of the balsam and the fir? Have you rolled out of your blanket in the morning with nothing between your head and the heavens but the waving branches of some broad-armed giant of the forest, knowing that it was twenty-five or thirty miles to the nearest habitation, and experienced a sense of freedom that could not be described in a volume? No? Well, pull down the top of your desk, put a card on your door reading, "Will be back next month," and join me on a flying trip to the always inviting forest which is now more than usually beautiful. At this time the gaudy-cloaked witch autumn begins to cast her many-hued mantle over the region of the Great Lakes. Bryant declares autumn to be "the saddest season of the year." Now, the countless thousands who go afield for the pleasures of the chase would rather see the primeval forest resplendent with the colors of Nature just before she casts aside her summer raiment than at any other time, for the Nature-loving sportsmen (all true sportsmen love Nature), well knows that the death of the leaf will add to the nourishment of the tree, and thus aid in clothing the dwelling-places of the fur and feather wearers with a richer coat of emerald in the spring. As the death of an insect gives a new-winged beauty to the forest and meadow, so the death of the summer leaf gives us the tiny bud, the harbinger of spring, closely followed by the beautiful, soft green clothing of early summer. Now come to the forest stream. The nights are cold, the flies and mosquitoes have departed, and the speckled-coated warriors of the brook are strong and ready to rise on the slightest provocation. What's this I hear? Discomforts in camp? Catch cold? Impossible to get suitable food in the woods? I beg your pardon; sportsmen never catch cold; never are uncomfortable in camp, if they know how to camp, and as to having plenty of good food in the forest, where a sportman's appetite will make one relish almost anything, let me tell you that nearly all able sportsmen are epicures, and the food eaten by them in camp is comparable to anything to be found in the markets of a great city. Forester, Walton, Cotton, and all other Nature-loving sportsmen paid quite as much attention to the care of the inner man as they did to the pleasures of the chase. Let me describe my friend, the Professor. He is fair, fat and forty, one of the most expert campers I ever knew, and a man I really believe who would be able to make an enjoyable dinner out of cobble-stones and pine cones, if nothing more inviting was to be had. I call him the Professor, because he never professes anything. He simply does everything, and what's more, does it well. He has travelled all over the world, angled and shot in almost every country under the sun; he knows every plant and tree, can

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tell you its proper and vulgar name, and whether indigenous or exotic, what it can be used for, and how to use it. The Professor, in company with several well-known sporting writers, Milton Price, the guide, and the writer, were enjoying an angling and hunting trip on the Bushkill Run in the Pocono mountains of Pennsylvania last summer. One day we found ourselves miles away from camp at noon time, and we were to meet at a ford well known to all the party, to have lunch, a rest, smoke our pipes, and then separate for the afternoon. On leaving our permanent camp, each member of the party had provided himself with a light luncheon, and when we assembled beneath the friendly shade of one of the grand old oaks at the ford, we produced from our pockets and baskets what we had prepared for our lunch. We were about to fall to in true hunter's style when "Kit" Clarke said:

"Wait for the Professor; he's never very late, and if we have a fire ready he will fix up a good lunch out of the cold stuff we have here."

We accordingly lighted a fire on the bank of the stream, and proceeded to take an inventory of the food-supply while awaiting the arrival of the Professor, who soon came tramping in and leaned his split bamboo against a tree, with a hearty "Well, boys, what's for dinner?"

This brought to light the fact that our larder contained four hard-boiled eggs, six ham sandwiches, about a dozen water crackers, a large piece of cheese, some salt and pepper, and a few winter apples. Our creels were tolerably well filled with trout, and one of the party (I won't say which one) had a small flask of whiskey. The Professor began diving into the pockets of his canvas shooting-coat, and produced, first, his catch, then some fine large deer-tongue mushrooms he had gathered in a pasture hard by, two splendid bunches of mint, a hatful of sour-grass or sheep sorrel, some cowslip plants, a huge bunch of water-cresses, two sandwiches, and a small tin can containing a thick, dark fluid. Carefully depositing these articles on the grass beside our somewhat scanty supply, he began giving directions which all cheerfully followed.

First, a dozen fine trout were drawn and washed in the stream, then several forked or pot-sticks were cut and sharpened, and a trout was firmly impaled on the forked end, and fastened over the fire, that had, by this time, burned down to a bed of glowing coals. While we were watching the trout broil, the Professor took the whiskey flask, bunch of mint, and two of our drinking cups down to the stream, where he carefully bruised the mint between two stones, partly filled the cups with water, added some whiskey and some lumps of sugar found in the never-failing shooting coat, put in the mint, stirred the decoction with a twig, and passed around as delicious a julep as I have ever tasted. Then, with his hunting knife, he peeled some huge rings off a white birch tree, and made a fine set of plates redolent with the perfume of the forest, clean and white as only birch bark can be, ready to receive the smoking trout now done to a turn. The broiled spotted beauties were salted, peppered, and served piping hot on the bark plates, garnished with water-cress, and eaten with some of the bread taken from our sandwiches. While we were discussing the first course, the Professor had taken four of the largest trout, wrapped them carefully in paper, and deposited them in the hot ashes of the camp fire. He then placed the slices of ham from the sandwiches onto the rustic toasting forks or twigs, and held them over the coals to broil. Don't be shocked, gentle reader. Broiled ham that has already been boiled is a treat, and so we found it, and all enjoyed it, I can assure you. It was eaten with the mushrooms that had been toasted over the coals, and the remainder of our bread. Then, the trout were taken from the ashes nicely cooked, and our stock of apples put in their place to bake. Here, the Professor's skill came in again. He carefully removed the well-roasted fish, separated the flesh from the bones, placed it on a large bark plate, added the sour grass and cowslips, salted and peppered it well, used a little sprinkling of whiskey in place of vinegar, and topped the whole off with the hard-boiled eggs cut in thin slices with a sharp hunting knife, and proceeded to serve the most palatable of all camp dishes, a trout salad, after which we partook of our baked apples, followed with the crackers and cheese, when our tin drinking cups, which had been filled with water and placed on the fire, were now lifted off, smoking hot, and a small portion of the black contents of the Professor's mysterious tin can was added, and we were regaled with a steaming sup of as fine old Java coffee as could be furnished in any club in the country. The contents of the can, the Professor explained, was a French preparation of coffee, milk and sugar that he discovered while abroad, and had prevailed upon a New York grocery firm to import and keep on hand for the benefit of their sporting customers.

A mint julep, broiled trout, with water-cress, and bread and butter; broiled ham, with mushrooms, trout salad, baked apples, crackers and cheese, and coffee. What a dinner!

After this sumptuous repast we stretched ourselves upon the grass and enjoyed our pipes during the progress of digestion. What sportsman ever had dyspepsia? We voted the Professor a trump, and I for one resolved never to forget his lesson in camp cooking, which I will show you, if you will join me on the banks of Lake Edward before King Winter locks this beautiful sheet of water and its singing tributaries in his icy fetters for half a year.

No proper food in camp? Can you say so, now? I think not. And, if you had been there I am sure you would, with me, sigh for another rural feast on the banks of the Bushkill.

J. Charles Davis

AN HOUR WITH THE AMATEUR.

An excellent treatment for a bullet wound is to wash the wound clean and cover with clean muslin saturated with a solution of carbolic acid or alcohol. The great object is to keep the wound clean and protected from the air. Do not foolishly probe for the bullet. It can be better extracted after the healing of the wound.

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To extract fish hooks from your flesh or clothing, cut the leader free and push the hook on through, depressing the upper end so as to bring the point out as near as possible to where it went in. Don't try to pull the hook back over the barb.

—

I fancy I hear my old-time friend of the rod and gun say as he reads these things: "Who cares? I shall never shoot myself or jerk a hook in my flesh." True, old friend; no more will I, but there are other less careful persons in the world than you and I. If I could only die by shooting myself by accident I should live forever. Some men are born rod and gun handlers and some are not. My father used to say: "When you go afield with an amateur first locate the cover, then the nearest surgeon."

—

Thirst can be abated by the eating of acid fruits or plants. The chewing of twigs, barks or leaves of trees and shrubs will also afford temporary relief. Snow and ice aggravates the thirst by chilling and closing the salivary glands.

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Learn to shoot without shutting your eyes when you pull the trigger. Beginners will find it hard to do this, but it must be done.

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In sighting either shotgun or rifle the left eye should be closed, except in the case of left-handed persons; then the right eye should be closed. Some men keep both eyes open, but the majority of shooters and all the crack shots close the left eye.

—

An extra pair of socks are handy on a one-day outing trip. Then, with your shoes nicely dried at my lady host's fire, you will be in comfort the next morning on your way home.

—

Avoid sleeping in close rooms. Keep the apartment well ventilated. Let in fresh air, but keep out of the draught.

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When out shooting carry a small square of chamois skin saturated with pure oil. Then you are prepared to well grease your gun in case of a rain storm.

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For sea sickness use a composition of essence of Jamaica ginger, ten drops; salvolatile, twenty drops; chloric ether, five drops; bicarbonate of soda, one teaspoonful; spirits of camphor, ten drops; water, one ounce. If thirsty and feverish, a teaspoonful, or more, of carbonate of soda or potash in half a tumbler of water, with one grain of quinine. When dissolved pour in the juice of one lemon or citric acid and water; then drink while effervescing. I do not say that this is a *cure* for *mal de mer*. I do not believe in any absolute remedy. The above certainly has a good effect.

If, when outing, you suffer from tender feet, bathe them every night

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in vinegar and salt water with a little arnica. Rub well the stockings inside with any pure soap, which prevents the stocking from scraping the flesh. Be sure and wash and rub them well, removing the soap upon retiring.

—

For a cut that is not severe the blood itself will be found to be the best healing agent, so bind up well with rag and leave it to Nature. For a bad wound a good lotion is: carbolic acid, one part in forty of water. Wash well with above solution and bind up with dressing wet in same solution.

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In treating a person that has suffered sun stroke or in any way been overcome by the heat, pour cold water on the head and spine, or place patient in cold bath, brook or lake, and give small doses of brandy and water, after which keep the patient quiet and administer a saline aperient.

—

In case of a bruise bathe affected part in a solution of one part of tincture of arnica, six parts of water; mix with vaseline and rub in well.

—

For burns, powder well with flour and lay medicated cotton wool over the part; bind on with rag. And, again: equal parts of spermaceti wax and prepared lard without salt. Lay thickly on linen rag and bind well. The lard may be prepared by washing it in cold water.

—

To bring your fish home first clean them carefully, taking pains to remove that little dark blood streak along the back bone. Then, after wiping them dry, pack them in ferns and be careful to keep them separate. Never send your fish home by express; take them with you. A box can not be expressed, therefore an old packing trunk is a handy thing. In this you can also put away your coarse outfit, such as wading boots, oil skins and landing net.

—

To preserve guns and steel from rust smear them well with mercurial ointment. The inside of gun barrels may be greased with vaseline. If the gun is to be laid away for any length of time cork the ends.

—

To somewhat repel musquitoes, flies, gnats, midges, black flies and all insects, have in your outfit a supply of pennyroyal oil, repelene or black fly cream. They are all good preparations and are kept for sale at all druggists and tackle and gun stores. To throw a little sulphur dust in your camp fire and to burn a little by itself in your tent helps to drive away these little pests; so does the burning of Persian insect powder on a little cotton rag. Damp grass, leaves and sea weed put upon a fire will make a great deal of smoke in case you desire a smudge. The mosquito head net, which is to be put over the head and fastened about the neck to keep insects away when one is either fishing, shooting, sleeping or sitting about camp, is a good thing in some cases, but is generally rather warm. A pair of skin gloves saturated in the oil of pennyroyal is a good covering for the hands.

Mosquitoes or troublesome insects of some kind are found in the warm seasons at most all game resorts. Persons who are accustomed to the existence of the same are seldom annoyed by their bites. It is the new-comer whom they relish. Residents of the mosquito districts have told me that I could become used to the bites and not feel them, and I have often tried it and found it a dreadful undertaking. I'm a devout advocate of war instead of patience with these little devils.

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Sack coats, either double or single breasted, with plenty of large pockets, heavy trousers, a stout vest and a cloth cap or hat are the necessary garments for outing purposes. When shooting have your clothing either brown or gray in color, or as near the color of dried leaves, grass or tree trunks. Avoid bright colors in clothing and head gear on all outing trips. In the summer time light canvas cloth is excellent. Corduroy, dogskin and heavy wool clothing is warm in winter. Never wear an overcoat in the field; put on plenty of underwear and a good, warm sack coat. A heavy, cheap, felt-like overcoat comes in handy when riding or sitting in your blind behind decoys, but never where you walk and hunt. Fur and corduroy caps are best for fall and winter shooting. For spring and summer snipe, plover and woodcock shooting wear canvas or light felt or cloth hats or caps. Light and broad-brimmed hats, dark in color, should be worn when fishing.

Chas Barker Bradford

A LEAF FROM MY DIARY.

NEUSTADT AM DER SAALE, BAVARIA.—What a quaint town this is, perched up here on a big hill, crowded with rickety houses as odd as they are old. Indeed, everything about here is frightfully old, among the oldest being the herding of vast flocks of geese, which are annually stuffed with boiled corn and thus fattened to the limit and prepared for market. At noon to-day, as I stood at the foot of the hill where the ancient portcullis guards the highway, I saw a flock of these toothsome birds numbering at least 2,000. It was goosey, goosey, gander, as far as the eye could reach, until in the distance, perched upon another hill, there loomed in stately grandeur the castle of old King Otto. I never heard of him before, but I am sure he was in the kingly business around here a good while ago, for the records of the town exhibit the well-authenticated fact that A. D. 891 the king levied a tax on all the geese in the kingdom. I have no doubt the birds I saw to-day were lineal descendants of tough old Otto's taxed *anser*. I liked the hotel opposite the Duke's palace at Meiningen, and also at Kissengen, but this one is really a surprise, as it excels any I have found in Bavaria. What a funny name—Hotel of the Golden Man. I'm looking now for the Hotel of the Nickel Woman or Silver-Plated Boy, or something equally wild-eyed and romantic. This country, however, is full of romance, principally because it is "loaded to the muzzle" with fine mountains, which, likewise, are horribly old. The Rhön Gebirge—American speech, Rhone Mountains—have spread themselves all around here, and I like them because they are full of trout streams, and to-morrow I am going to "work" one of them. I have engaged a team to convey me to Wegfurt, ten miles away, in the morning, and so, the good deed inaugurated, I'll hie me off to that ever present feather bed. These people know nothing of the luxury found in a wire spring and a hair mattress. They were born, always slept, and will die in one of those merciless sweat mills—a feather bed.

HOTEL STADT COBOURG, GOTHA, DUCHY OF SAXE-COBOURG-GOTHA.—More Americans should visit this part of Germany when they come to Europe. It would be difficult to find a prettier town than this—a little city with fine, wide streets, imposing buildings, stately palaces, lovely theatres, great schools, orange gardens, and, in short, built in every essential feature like a great capitol. But I am too tired to see much of it to-day, for yesterday I waded the Brend and with hackles took fifty-four handsome trout, called by the natives *back forellen*. They are the true char, our own blessed and beautiful brook trout.

The Brend is famous throughout this country, and it is a real "daisy" for trout—about as near the ideal as could be wished for—but, aside from the brook, everything else was decidedly "off." *Imprimis*, the wagon which carried me over the *Landstrasse*, was immeasurably the toughest vehicle my carcass ever "tackled." The axles were as bereft of springs as a chunk of red sandstone, and the shaking up I got was a thing to be remembered. The dead-axe lumber wagon of the Michigan pineries was a golden chariot by comparison. And then the horse—ah! the horse—well, never mind; he beat me out on dinner, for he ate an entire loaf of rye bread, while I was awarded but two slices. My coachman informed me that it was more economical to feed rye bread to the horse than the uncooked cereal, because there were two tax imports upon the grain and but one when made into bread. This is one of the best I have heard in Germany, and I confess it's altogether over my head. We rode through Brend-Lorenz, another "old-timer," stone-walled on all sides, and Schonay, where every dwelling boasts a pig pen instead of a piazza. We finally reached the village of Wegfurt, "composed of one house." It is built of stone upon the very edge of the brook, while over the entrance hangs a sign which, literally translated, reads: "The fine beer of Munich; it is here sold." It is nice beer. Four young men stood at the door of the town as I crawled from my awful perch, and looked upon me with wide-eyed wonder as I rigged up my little Leonard bamboo rod. The rod, the reel, the line and leader created no little surprise, and, when I tacked on the hackles, their amazement was indescribable. That frail leader and the dainty flies, however, were as a drop in the ocean of their wonder when they saw me cast upon the pool and instantly hook a half-pound fish. The arch in my rod was bewildering to my audience, and when I landed the fish was promptly offered the freedom of the city in a *stein*, to which I did complete justice.

Then I crawled into my wading boots and started down the stream, while the coachman guided the steed and chariot along the road above me. About noon I was accosted by a General of the army—at least his

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sumptuous appearance indicated that exalted grade—demanding my permit. I had paid ten marks (about $2.50) for it the day previously, and, producing the document, there was no further interference. My document gave me permission to fish five miles of the stream in one day, or one mile in five days. At 6 o'clock I had covered the five miles, and, with fifty-four trout in my creel, started for the barouche and Neustadt. Coming up the hill I peeped into a little stone oven, only to perceive a figure of the Virgin Mary, and afterwards found the woods full of these oases of prayer. Some of them had been nearly worn out by the peasants, and the attentions of a blacksmith and a bricklayer would have been highly beneficial to the lonely occupant. I reached the hotel in time for a good supper, and when I re-entered the office I found my fish spread upon a table, around which half the town seemed to have gathered to admire my quarry. I heard one villager describing the wonderful method of capture I had practiced, and, upon looking at him, found him to be one of the young men I had met at Wegfurt. He had walked into the town in order to convey the startling intelligence that an American angler was just "paralyzing" the *bach forellen* by a most mysterious and marvelously successful process. I was obliged to display all my tackle before retiring. I moved away at 6 o'clock this morning. I believe I would have been called upon for a speech had I remained there another day.

Kit Clarke

A NATURAL WESTERN GAME PRESERVE.

The old man nods in his easy arm-chair
By the log-fire's cheerful glow,
And dreams of the times when he was young
In the days of long ago.

On a cold and stormy night, when the wind whistles around the eaves and the rain pats dismally on the window panes, what is nearer contentment than to sit before the good old-fashioned log-fire and fight over again the royal battles of our former outings?

The pleasure of a trip after the wary and agile trout, the silver-coated salmon or the more acrobatic tarpon, or, if you be a Nimrod, the whirring quail or "partridge," is half in the anticipation and the other half in the reminiscence, while the actual experience acts as a feeder for both.

How often in the flame of the fire our fancy brings us back again to the rugged banks of our favorite stream, and how vividly we see each familiar pool and eddy, whose ruffled surface has oft and again been churned into foam by the erratic dashes of a speckled pounder, while further along, where the sparkling stream enters the flower-studded meadow, stands the old mill, under whose foundation the placid current, aided by years of almost unceasing toil, has eaten its way until we wonder what powerful influence prevents a total collapse of this century landmark. It is here that our blood tingles, and well it might, for under the projecting roof of an old partly water-soaked raft is sheltered the monarch of them all, who, time and again, has proved himself a match for all our cunning manœuvres, born of a life-long experience on the stream. Yet we do not linger long over this picture of our baffled skill, but dismiss it with a resolute "wait till next season" and pass on to more congenial spots where the battles have ended with more gratification to ourselves. And on our memory wanders from one scene to another until the growing chilliness in the air and the deepening shadows on the walls mark the dying out of the fire, and as the old clock strikes the midnight hour we realize with a start the fascinating tricks our dreamy fancy has played us, and are off to bed to be wooed to sleep by the soothing patter of the rain drops and perhaps to more adventures of field and stream.

Choose what path you will,
But give me Nature's broad domain.

In my ramblings over the different states and through Canada east of the Mississippi basin I was much impressed with the advantages offered the sportsman tourist by the country adjacent to the boundary line of the Upper Peninsular of Michigan and Wisconsin, particularly that which comes within the area known as the Eagle Water region. Of the latter many unfavorable reports have appeared of late in the different sportsmen's journals—reports that put them down as "fished out" and other discouraging terms liable to prejudice anglers against these waters.

If these disgruntled angling writers would engraft upon their creed, "It is not all of fishing to fish," and duly appreciate the full force of its application, they would find increased pleasure in their outings and cease to estimate the success of their fishing trips by the number of fish caught, rejoicing in the invigoration of body and mind that is gained and the pleasant reminiscences their outings recall.

The old saying that "familiarity breeds contempt" is just as applicable to fishing and fishing waters as to the soil where Shakespeare planted it. Is there not four-fold the pleasure in the capture of one fish every half hour or so than in the continual pulling in and throwing out process in an endeavor to fill a boat? After the first dozen fish the novelty wears off and we become surfeited with the "sport," and every true angler should feel like moving his boat to less fruitful waters. But I have wandered from the Eagle Waters.

When I visited this region last year I found little evidence of the terrible inroads of sportsmen the fraternity in Chicago would have us believe, and while I was there in the worst possible month—August—the fishing proved very satisfactory in the lakes nearest the railroad, while a carry of a few miles brought me to almost virgin waters. But it is for the Nimrod that the greatest charm of this country exists.

While I like all the comforts and many of the luxuries of a home life, I do not let the lack of them interfere with the pleasures of a month's stay in the woods, and my "kit" contains but the bare necessities of camp life. When with a friend our impedimenta consisted of a light cedar boat, two hammocks, woollen and rubber blankets—the latter to cover the hammocks—a few cooking utensils and necessary staple provisions. We cut loose from civilization for several weeks and explored a number of the lakes of this region with only the aid of a defective chart and a compass.

In the lakes of nearly all of the chain known as the Eagle Waters we found large and small-mouth black bass, pike-perch, rock bass and pike in great abundance, with here and there a mascalonge. The shores were fairly overcrowded with game, the common red deer being particularly abundant. I remember one afternoon, when lying in my hammock under the shade of a giant pine which reared itself, sentinel like, from a little knoll in the centre of a small island, awaiting the return of my companion from our fortnightly pilgrimage to the post office, some sixteen miles distant, I counted nine deer standing almost shoulder deep in the water around the edge of the lake, where they had been driven by the myriads of mosquitoes and flies that swarm in the dense undergrowth near the shores of these waters.

One of the peculiarities of this region is the annual migration of the deer, which takes place soon after the first snow, and by the middle of winter hardly a single specimen will be found in a week's hunt. The land adjacent to Lake Superior, about twenty-five to thirty miles distant, is their winter stamping ground, and to this change of habitat, the increase of game in the Eagle Waters is undoubtedly due as the deer return to the lakes every spring, and bring forth their young in the seclusion and safety afforded by the impenetrable brush of this section. The close observance of the game laws by the natives or rather their apparent indifference to shooting them, is also a factor in their increase.

The best time for fishing and hunting is, during the months of September and October. By the middle of the former month, the flies and mosquitoes disappear, making the interior of the country visitable with some degree of comfort, and the lakes are through their annual "bloom," so called, which is simply the seed-time of the water plants, which are very diffuse in the lakes of Northern Wisconsin.

A word of advice to the reader who may contemplate a camping trip to this region during the summer months. I have had my skin penetrated by the snipe-like bill of the famous mosquito of the Jersey meadows, which we are told are often shot by snipe gunners in mistake for the English long-bill; I have been torn and mangled by his near and malarial stricken relative of Staten Island, and the far famed mastodon species of the Florida Everglades, individuals of which work on a pivot and bite at both ends, have also "got in their work," but for real busy bee tenacity and gimlet penetration, I will back the Wisconsin variety against the field. A thousand and one "preventions," good, bad and indifferent, are suggested for these pests, several of which I was provided with but they proved rather an attraction than otherwise. A headgear of black Brussels' net, made circular in form and bound with elastic at both ends, so as to fit snugly over the crown of the hat and close over the shoulders, is about the only sure protection obtainable. Of course a medium weight glove is necessary for the hands; but this protection is only needed during the summer and should not deter any lover of Nature, even though the rod and gun be only incidentals in the impedimenta of his outing—from the enjoyments of a country so charming to the devotees of field and stream life.

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The most central point of entry to the Eagle Waters is from Three Lakes station, on the Milwaukee, Lake Shore and Western Railroad, where through connection is made by two trains daily from Chicago. Provisions, guides and boats can be obtained in this village, while a comfortable, though plain, home for sportsmen stands on a peninsula at the entrance to the lakes, two and a half miles distant.

If you are worn out in body and mind, if your nerves are unstrung or your digestive organs broken up, and you wish to get far away from the strain of business exactions to a spot where you can take your siestas under the giant shade trees, with the broad vista of forests, hills and dales opening out before you, or where the resistless, yet soothing, influence of placid waters is broken only by gentle winds or the dash of a leaping mascalonge, go to the Eagle Waters and find there the *ultima thule* of your most ardent longings, the realization of a sportsman's Paradise.

Henry Ritter Harris

A DAY'S SPORT IN NEW ZEALAND.

Sunrise in the hills of Maoriland is not like a sunrise in any other part of the world. Here sub-tropical scenery lighted by the first bright beams of the orbs of day is more gorgeously beautiful than it is between the same degrees in any other portion of the Australasian continent. The giant blue gum, the wild fig and the stubbed cabbage-palm are indigenous and peculiar to a New Zealand forest, and when growing on mountain side or plain with their different shades of green lighted by the glinting beams of the morning sun, as their wide-spreading branches toss and wave in the nearly always strong breeze, they present a picture not easily forgotten.

My first view of an antipodean forest was one bright June morning. We—Mr. Blank, my Auckland friend and myself—had driven out in the evening to a sheep farmer's station for a day's shooting over his broad acres, and in order to get an early start with the dogs we were obliged to follow a pair of real hotel stable horses fifteen miles in the country to reach the *humpie* of the worthy tiller of the soil by midnight. We were up with the cocks and hens, and after discussing some of the very best lamb chops I ever tasted served with fresh, good milk, country butter and bread, washed down by a cup of hyson, we put our fowling-pieces together and were afield, as above stated, in time to bid good morning to old Sol as he left his bed in the blue waves of the southern Pacific. We were accompanied by our host, three stalwart Maori boys and fully a dozen dogs of all the sorts, sizes and varieties ever known, and I think some that were previously, and will in future, be unknown. We had kangaroo hounds, Irish stag hounds, setters, pointers, beagles, and dogs—just plain dogs—some of which might have been sired by a bootjack and dammed by a window shutter. I never saw such dogs—they were all kept in a state of semi-subjection by a dusky native with a huge cattle whip which he would crack with a noise like the report of a pistol when he wanted to check his unruly charges. The Maoris and the dogs were sent to beat a small patch of timber for wild hogs while Blank and I were stationed at the mouth of a ravine with instructions to "shoot anything that came out except the dogs." I never heard such a din as the dogs made in this bit of cover. This, accompanied by the shouts of the natives and the cracking of the whip, would have stampeded a herd of elephants. We had not long to wait before a loud "mark bird" from our host caused Blank to snap a wood pigeon. I tried a shot at a parrot but missed; next came a perfect swarm of rabbits and we soon had our barrels hot with the fusilade; finally out came the dogs, but no wild pigs. We next crossed a large field toward a splendid bit of cover where I had the good fortune to kill a kiwi or wingless bird, the first one I had ever seen or heard of. Next Blank bagged a brush hen, when our dog-whipper called in his pack to enable us to "have a go" at a flock of wood pigeons, which, by the way, are the finest specimens of the pigeon family in the world. They are as large as a bantam fowl and of the brightest possible green, but are not game, as they will not take wing without something very unusual startles them. After feeding on wild berries a flock of them will sit in a tree and be shot one by one without making an effort to escape. They are always fat and are very fine eating.

We shot about a dozen of these birds and were about to leave the wood when I saw a large brown bird flying through the tree tops and cut him down with a snap shot among the branches. He only had a broken wing and at once set up a great squawking like a frightened parrot. I was about to go and finish him when my host bade me wait, concealed under cover of a small tree; I noticed Blank run to ambush, and wondered why for a moment, when I heard cries similar to those uttered by the wounded bird proceeding from all parts of the forest, and soon the air was literally filled with birds. We began shooting them as they circled around among the trees, evidently trying to come to the aid of their companion. We had soon fired away about one hundred cartridges, and had the ground strewn with birds which Blank said were ber-caw-caws. They were like large bronze pheasants in size and shape, with hooked bills and long tails. They are members of the parrot family, are to be found on the North Island of New Zealand in great quantities, and can be easily killed if one can be wounded, as the flock will never leave a companion in distress. I confess this slaughter was not to my liking, but while it lasted the excitement made me forget that it is unsportsmanlike to kill for the sake of killing, but it was really good wing shooting, and we were informed that the birds were delicious eating. Our next try was for wild turkeys, or blue turkeys, as they are more often called in this country. These birds are large game and strong of wing, and as they usually stay in the open, we found much more difficulty in getting them than any other members of the feathered tribe. We had found four turkeys, two parrots, a couple of brace of rabbits, and we were out of ammunition and obliged to return to the farm house for supplies, and we found them—both liquid and solid—in plenty.

After the deft fingers of the native servants had picked and prepared a brace of pigeons and one of the huge parrots for our dinner we partook of a cup of peach brandy and proceeded to enjoy a novelty in New Zealand, a country dinner without mutton. Mutton is the standby here as beef is in old Albion. Fresh or corned sheep meat steams into the nostrils of the traveler from every table. The birds were delicious and our hunters' appetites made us do full justice to them, after which we spent a comfortable half hour on the veranda in communion with the nicotine spirit and mused on our first morning's sport in Australia. In the afternoon we drove over to a Maori pah or village for a brief inspection of one of the finest races of semi-civilized races on the face of the globe; a race that, I am very sorry to say, is, thanks to the christianizing influence of the Anglo-Saxon, fast becoming extinct. A description of this quaint and highly interesting dwelling place of the dusky natives of the rock-bound, sea-girt land of the Kanacka would occupy too much space, and so with apologies for the length of my present yarn, I will close and promise the readers of NATURE the story of my visit in the next number.

J. Kline Emmet Jr.

HAPS AND MISHAPS IN GUNNING.

The predicament of the sportsman who has to wear eyeglasses in the woodland cannot be fully understood by those who can get along and see their game without unnatural accretions on their optics. The gold rimmed eye-glasses that may or may not, according to the individual, look so becoming while ogling the fair dames along Broadway are an uncertain help in the forest. Of course, if you want to look "professor-like" and wear spectacles you are better fixed, but the usual eye-glasses are not shed without regret. Mayhap you see a pair of woodduck; you fire at one, the rebound knocks off your glasses, and you are in doubt as to which of a thousand clusters of leaves is the other duck. You shoot away in the general direction and have no idea as to whether you hit the other one or not. Perhaps you are uncertain about the first one and have to skirmish about to look for the bundle of feathers in the dry leaves. You hear a rustling as of quail flushed, but a cat brier has caught in the string of your glasses and they're off, but you have to fire at that moving shadow you imperfectly see and are only told subsequently by your friend that you have shot at a hawk half a mile high. Perhaps your glasses with the perspiration from an exhilerating walk have dropped obliquely on your nose, and looking through the edge you see three "rabbits" starting out in different directions. But the rustling of the grass and leaves helps you and you fire after the real rabbit but you have been unable to calculate the distance, and a second shot is out of the question, as your glasses are dangling. You go home and

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swear off the gold rimmed eye-glasses and appear next time with a base-ball mask as a frame supporting two bull's eyes. The game results are all right, but the effect has been altogether unsatisfactory on the forest damsels at the woodland inns where you had gotten your meals.

They say that there are grouse in the Ramapo Mountains, and occasionally you meet a man who has heard that quarry going off like a rocket through leaves. You seldom meet a man who will aver that he has seen one there. I ran out on the northern road to Sparkill and took a conveyance for five miles inland, and then footed it for several miles more with a Ramapo sportsman. In going over those interminable hills I occasionally heard a distant whir, and was informed a "partridge" had got up. "Did you see him?" I asked, and he replied: "No. of course you never see them here; they are too wild." The noise we frequently heard, and occasionally my friend discharged his piece; "What did you shoot at?" I asked. "At the noise," he replied. It was strange hunting for me, but after half a dozen shots had been fired I found, to my surprise, a dead grouse in a path over the hills. We got several other kinds of game, but I never fired my gun at the "noise." My friend was shooting, as he informed me, philosophically. He said the "partridges," when they heard any one approaching, took to the paths in order to run quicker. The moment he heard one get up he shot several feet above the path he was on, but using the path to direct his shot. He kept in the mind that these birds fly, when flushed, on the top of the mountain down toward the foot, and, when started below, fly up. He was not very successful, but he was able occasionally to kill game, when, with all my years of experience, I was unable to fire a gun with purpose.

I took a run down the North Shrewsbury River the other day, in a small yacht for ducks. Those who think it unsportsmanlike to approach duck by sail as they usually allow one to approach too near owing to the apparent want of movement, would have their conscience qualms set at rest in that river. There are so many boats that the duck are kept on the go and it is not often you can get any too near them. But it happened this day that I nearly ran into three of them before I saw them. It was evident that they had no intention of getting up, so with the three heads on a line and not a hundred feet away, I fired. Only one got up and I gave him the other barrel and he dropped almost immediately. I sailed up to get the game and found the water clear. Soon after a duck got up two hundred yards before the bow. Another followed about the same distance off the starboard, and a third emerged away off the port side. They got together and flew out of reach and I have been wondering what kind of ducks they were, and if I shot the first three and if they were so loaded with shot that they sunk and if the three subsequently appearing were the sprites or *manes* of the others.

Charles M. Beattie.

KAHKAHLIN AND THE SQUIRREL.

Several persons unfamiliar with woodland gunning have written to me to give them an idea or two on squirrel shooting. With your permission I'll make brief notes and put them to my friends through NATURE. Seek out, quietly, all the nut and oak trees of your locality. Have no dog with you. The squirrel is a cute and sly little fellow; he will lie motionless on a great limb right before you, and it is nine chances out of ten that you will go away without seeing him. If there are two of you, approach the tree on different sides and look it over until your necks are stiff. Gray squirrels are quite the color of tree limbs, and they seem to know it by the way they act. Gray, black and fox squirrels are worth ammunition; but avoid taking the little red squirrel unless the camp larder is very low. Squirrel shooting is mostly done with a shotgun, with ordinary No. 7 or No. 8 bird shot, but a larger size is preferred. Some great sport may be had with them with a twenty-two calibre rifle. Time: fall and early winter. My dear friend "Benwood" is the man to write about squirrel shooting. *Kahkahlin.*

A little girl, after being out for some time trying to ensnare the little fishes in a neighboring stream with a crooked pin and a thread line, came running into the house, out of breath with excitement, and exclaimed: "Oh, mother, I got it!" "Got what, my child?" "Why, I got the fish." "But I do not see any fish." "Why, mother," answered the little angler, her voice suddenly changing to mournfulness, "I got it, but it unbit and div!"—*American Angler.*

The philosophy of science is an attempt to discover by subtile means what has been a matter of common information for ages.—*Chas. Hallock.*

CHOOSING A GUN.

There are a great many young sportsmen or amateurs who follow the instinct of their natures and like to go shooting. This word shooting implies a very broad meaning, and while some go to the woods to shoot game, vermin or whatever they may find, others go only to shoot their particular kind of game, and in their own particular manner. Some like to shoot to make a noise, and the Fourth of July with all its powder, smoke and noise is sport to them. Others prefer the rifle, with its sharp and spiteful crack and single bullet—they measure skill and nerve against the instinct and cunning of their quarry; and the quick eye, the steady nerve and true and trusty rifle sends the leaden messenger on its errand of death in an instant, and the bullet seldom fails to do its work quickly and decisively.

Others there are who love the gun—not the "Zulu," which does just as well to make a noise or tear the tiny chipping bird to shreds—but a good gun, one that not only shoots a good pattern, but that is pleasing to the eye, "a thing of beauty and a joy forever." There are those who go to the furtherest extreme and pay enormous prices for fancy guns that can be of no more practical value than the one of medium price, but, if the sportsman has the money to pay for it, the gunmaker gets the benefit of it, and it's business. Among all these classes there are those who sometimes buy a new gun, and for the benefit of those who do contemplate the purchase of this much desired article, I would suggest a few ideas, as part of my own personal experiences of over thirty years in using the gun and rifle. While no true sportsman could be long contented with a cheap or inferior gun, there are some whose ways and means will not allow them to put out fifty or seventy-five dollars for a gun which, perhaps, they will be able to use not more than a half dozen times during the season. If a cheap gun is desired, there are some of American manufacture that are safe, strong and serviceable, those in the single gun line, which are cheaper and better than any imported ones; and while it is true that a double gun is better, and is always to be chosen, other things being equal, if but little money can be spared, get the American single gun. There are several good ones, among them being the Stevens, Forehand and Wadsworth, American Arms Co.'s and others.

Now, if a low-priced double gun is desired, the order of things are reversed, the loud harangue of American makers to the contrary notwithstanding. For, say, eighteen to fifty dollars, an imported double gun will discount the American, if the purchase is judiciously made. True it is that some of the most miserably poor guns in existence are imported and sold here in large quantities, at high prices, by unprincipled dealers, but from almost any of our leading gun dealers we can get a good, sound, strong, serviceable gun, one that will shoot well, wear well and look well, for a price that no American manufacturer, as yet, can meet and live. The writer is a thorough American and believes in American institutions and American manufactures, but facts are stubborn things, and the fact remains that a good, sound gun can be imported and retailed here to-day at the moderate price of twenty dollars, and some fairly good ones at even a less figure.

The writer is neither an importer or manufacturer, so does not seek a free advertisement. A sportsman choosing a gun wants all the modern improvements upon it as a matter of course. While the pistol grip stock, a few years ago, cost from five to ten dollars extra, guns of a cheap grade even will not sell to-day without the pistol grip. Rebounding hammers, on hammer guns, are also a positive necessity, and for safety's sake alone, if for nothing else, every gun should have them. With the hammerless system, it may now truly be said, "they have come to stay;" and, while there are those who do not like them, they probably will supersede the hammer gun to a great extent; but how much better they are is still a subject of discussion among a great many sportsmen. The old and well-tried Greener treble wedge fast action is now being used on a great many guns, the patents having expired, thus leaving it the property of anyone who chooses to adopt it. It is undoubtedly the best fastening ever invented and makes the barrel and action practically one solid piece when the action is closed. The barrels are of course a very important part of the gun, and as a rule it has been found that a good pair of English twist barrels have more of the good qualities combined than any others, and that for an all-around gun they are as good as any that can be found, while the additional cost of the fancy-figured barrels adds nothing to their sterling qualities and genuine utility.

The gauge of a gun that is the best for all around work is pretty generally conceded to be twelve, about thirty inch barrels, and from seven to eight pounds, according to fancy, and the work desired. The

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length and crook of stock is something to be looked after, and, while a shooter may become accustomed to a stock that is so little different in the drop, he should be more particular about the length, as a man can never shoot quickly with a stock that is too long for him, and may get a very uncomfortable rap from the recoil if much too short.

There is quite a diversity of opinion regarding the proper charges for guns, but it has been found, in many cases, that with two guns nearly alike, the same charges would not operate the same. Each individual gun needs to be targeted and tested with different charges of shot, and also different sizes. The same brand and charge of powder will not give like results in the aforesaid guns, and oft times the wadding will make quite a difference. For all-around work and general use, paper shells are now quite generally used, as they are cheap and made much better than formerly, as well as being sure fire and nearly or quite waterproof.

The size of shot for game shooting is also a subject upon which sportsmen differ, but as a rule they are apt to use one or two sizes too small. Regarding the matter of cartridges for shotguns, the ammunition factories are now turning out excellent ones, and selling them at a less price than the sportsman can buy his shells and materials for, and it is of little use to bother about one's own cartridges now, unless, perchance he may prefer to use the brass reloadable shells. In using brass shells, much annoyance has been encountered by the wads over the shot coming out and causing the loss of shot. This may be remedied by using a black edge wad over shot and cutting through the centre at right angles, or in the form of a Maltese cross. The friction holds the wad in place, but when it leaves the muzzle of the gun it flies into four pieces and will be found near the muzzle. The shot virtually passes through the wad and the four sections fly in opposite directions.

Now that we have an idea of the choice to make when we purchase the gun, we will give some attention to the art of using it, to bring every fair wing shot to bag; and in another article I will try to give some experience in this line, as well as some hints on the choice of rifles for game shooting, its ammunition and its care.

Reuben Harwood.

MOLLY WHITE AND THE WOODCOCK.

Now the sky is blue as steel and the river clear as glass,
Now the mist is on the mountain and the network on the grass;
Now the harvests all are housed and the farmer's work is done,
And the woodland is resounding with the spaniels and the gun.

Forester.

BROOKSIDE COTTAGE, CANADENSIS Pa., October 21, 1889.—Here we —Dr. Levering and "Jacobstaff"—are in the Pocono Mountains, at this, the daisiest of sportsmen's retreats, within the sound of the waters, where the *fontinalis* leap in living thousands, and just under the wooded mountain where the *bonasa* has its home in numbers; sufficient for the most ardent sportsmen, if he can kill them.

The swales here and there have been alive, with the long billed "timber doodles, while "Molly White," sits in her form or skurries off at your approach, showing little but her white flag almost everywhere in the copses. We have had magnificent weather, a kind of Indian summer, I take it, with cool nights and bright balmy days. The woods are radiant in their fall clothes of red and gold. How few countries can cloth their forest trees at death, with such golden splendor. I might go on, I suppose, and give you a moral essay on the end of the good-going out in splendor and all that, but I won't.

We have not bagged much game, and it's our own ault, but the trip is doing us a heap of good.

Brookside Cottage is a good place to camp down in. In my pursuit of sport and game resorts, and experiencing the many annoyances attending the same from Shinnecock bay in its prime to Pamlico Sound, up north in the Adirondacks and as far west as the Mississippi, never have I found a place that has so taken my heart by storm as the above Cottage and its kind true hearted occupant.—Mr. Crane, the host, well backed by his helpmate and housewife—and she is that in every meaning of the word. Mrs. C., ample of form, with a motherly heart, and bright eyed Jennie, stalwart George and romping, teasing Fannie. They all strive to make their guests comfortable and at home, and they do it. The rooms are large, with ceilings high, beds soft and springy, and the table more than excellent. Their house is full from June to October, some thirty-three to thirty-five persons, sitting down to the table regularly; that is, summer boarders. But it is as a sportsmen's resort, that I wish to speak of it. Lying in the Pocono Mountains in Monroe County, on the border of Pike County, famous for its deer and bear, a drive of a few miles brings you into the densest wilds. Blooming Grove Park is but twelve miles distant; but there is game enough closer by, right around the house; you may kill it; we could not. Never in the history of the oldest, has the ruffed grouse been so abundant or so large and fine in flavor. Their hatching this spring must have been very successful. The foxes have not been so abundant, and the grouse grub so destructive some seasons throughout a great stretch of country, does not seem to have appeared this fall, and we saw but one hawk during our entire trip. Harding, the conductor on the Deleware, Lackawana and Western Railroad train, told us that he knew of over 2000 grouse having been shipped on that line, since October 1, besides the many taken by sportsmen that he had no cognizance of.

An account of one day with the *Tetraonidæ* will be sufficent. We were up between times on the 18th, and after a hearty breakfast, in which light brown biscuits, sweet butter, delicious coffee and cream that was cream, was no insignificant part, we were off for the Beach Woods, where we expected to find some of the many grey squirrels we had heard so much about. I had my heart on a squirrel pie, like those of my boyhood days, but alas, it proved too late in the season, and the *Sciuridæ* had evidently taken themselves to their winter quarters. We found their summer houses where they taught their young and where they snoozed in the long summer days but none of the family appeared to view.

Did I tell you we had no dog? It is hard hunting grouse anywhere without a dog and it is not a very successful opperation in Munroe County.

We had hardly struck into the bushes, and were wondering to ourselves which way to turn, when "Whirr!" "Whirr!" were the sounds we heard, and from under our very noses arose two big grouse. "Bang!" "Bang!" "Well done, Doctor; I shot behind mine." "Whirr!" "Whirr!" "Whirr!" "Bang!" "Bang!" Well, I'll be blessed! what did you shoot at my bird for? And why didn't you shoot your other barrel?" "Two nice birds, anyway; can't find yours?" "Why, 'Doc.,' it fell just over there by that chestnut whose leaves are dyed so golden by the last frost. Isn't there? Too bad; only one bird out of five up and four barrels fired. Oh, for a dog." Such were my expressions. In the first place had we had a good dog we would have known beforehand that the birds were there, and would have been ready and probably got more down and when down would have been found by the dog even if only wing tipped as was probably the doctor's lost bird.

Well, let's hope for better luck next time.

Let us go down this way—it looks as though there might be a swale down there and the grouse are apt to linger around the border of such.

"Whirr!" "Whirr!" "Why didn't you shoot," I asked. "Thunder, my gun wasn't cocked." We didn't swear but we felt like doing so.

Then we went down on the bottom.

"Hold hard, Doctor; see, there ought to be woodcock here if they have not all gone South. We have had some heavy frosts but there may have been a late flight. See here, look at these boreings, five and seven small holes; those are recent—ah! I told you so." And the peculiar whistle so exhilarating to a sportsman's nerves broke upon the stillness and a lordly cock topped the alders to be cut down by the Doctor in excellent style.

"What a beauty! An October bird, full eight ounces." There goes another! O, why wasn't I ready? Pshaw! thrown off my balance again. O, for a dog. There are woodcock here; don't know how many, but we will have to step on them now to get them up; no dog."

A short distance farther and "Whirr" was heard again, and a big cock grouse arose almost perpendicular and essayed to scale the dense alders and disappear in the brush. A snap shot by "Jacobstaff."

"Did I hit him? I don't know; I didn't see him at all when I pulled; I simply sent the charge in the direction in which I last saw him." But the thud, thud, that beating of the wings on the ground of the dying bird told the story. Ah, what a joyous sound that is to a sportsman's ear who may have made a blind shot. Another bird was relegated to our bag.

Why need go on? It would be but a repetition. Suffice it to say we found plenty of birds in twos and threes, the single bird being the exception, no other having been put up before. We made some fair shots but made (at least I did) more abominable misses. And here I believe I can give a reason for some of them. In the first place I was using a gun closely choked for duck and trap shooting. But even so, I used to shoot it once in the brush with some degree of success but the stock was

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destroyed by fire and the new stock put on by Charles Overbaugh, while being an elegant piece of workmanship, it does not fit me for snap shooting as of yore. I will see about this one of these days.

But, it is as the great trouting region we wish to speak of Canadensis. It has contiguous to its peaceful settlement some score of streams that in the season are abundant beyond expression with *fontinalis* Though few fish of two pounds and over in weight are brought to hand, yet a half day on the Buckhill, or, better still, Bright, creek, a fair fisherman may fill a good sized creel with fine half to three-quarters and one-pound fish.

The stream Broadhead creek flows but a few yards across the main street in front of Brookside Cottage, and the ladies of this delightful place, I am told, have shown themselves no novices in Walton's gentle art. Parties are made up in a short ride up the mountain and a fish down to the main stream results in many a delicious meal without any of the hard work and annoyances incident to a regular fisherman in known and unknown waters.

We propose to wade some of those streams in our trip next May when we may tell you all about it. *Jacobstaff.*

A LOVELY TENDERFOOT.

A few years ago it was my privilege to be one of a congenial party of Southern gentlemen, who were bound to have some deer. They had learned that such game was around, if not plentiful, at that season in the Southern part of Alabama. Anxious to participate in the chase and never having had any experience, I was eager to enjoy it, and willing to do my part in securing some deer meat, however tiresome or arduous the task that might be set before me. I could shoot a little, but did not air those desirable qualities to any extent, so the guides put me on the drive, and surely I did drive. Weighted down with a heavy gun, I tramped over twenty-five miles the first day, and that I was good on the drive was quite evident when, on returning to the agreed meeting point, I looked upon several deer, among them quite a noble buck, whose antlers we preserved.

That night I was tired and gladly accepted a couch, which was nothing more than the soft side of a plank. There were seven in the party, stretched out side by side on the floor under the porch roof of one of the guides' homes, the rooms being occupied by his family. I was up early the following day, and after the deer again—but not to do any more driving. A stand was good enough for me, and I was therefore placed under a tall pine tree to keep a lookout for the bounding creatures. Now and then the baying of the hounds could be heard, and I was all alert, but the sounds died away, while no deer came to my vision. A big owl soon settled down on a tree not far off, and I blazed away at it, but the homely thing said tw-woo and flew away. Surely my aim must have been poor. I watched longer for the deer but did not hear a sign. Then I resolved to snatch a short nap, which proved a long one, as the afternoon shades were falling when I awoke to find myself alone in the wilderness, unfamiliar with the territory I was in. I "struck out," however, in the direction in which I supposed the camp to be, and, after a long tramp, just at dark, I found my friends there. As I related my experience they all laughed at me heartily and said I was a lovely tenderfoot. More deer were brought in, but all were killed by the guides who seemed to know just where to find them, and thus it was all the rest of the week—the guides killed all the venison, and out of the party of sportsmen one only had a deer, and that was a young live fawn, for which he had bartered his rifle, with which he had missed a bounding buck. But withal, I enjoyed the trip, as in fact did all the party, as it was at that season of the year in the South when all Nature is clothed in its most gorgeous array, the birds of the air singing songs of joy, and all things seeming glad. It is these things which true sportsmen love best to dwell among and talk about. I should have been delighted to have brought down a deer or even seen a live one, but I made up the absence of such an opportunity by enjoying Nature to its fullest extent. And now since arduous duties are mine, and it is not so easy to get away to the woods, it will be pleasant to read of Nature in NATURE, which I truly wish the real success such a paper deserves.

Charles S. Derby.

When in a small boat or any craft that is liable to upset with your gun, attach a long cord to the boat's seat or side rail and fasten the same to the trigger guard of your gun, Then it can be saved without searching the river bottom.

REPORTS.

CANADENSIS, MONROE COUNTY, PA.—The woods here are perfectly glorious, and I scarcely believe that there are two leaves of the same color on any of the trees. It unnerves me to walk through the woods, because at almost every step the whir of the "partridge" (grouse) is heard, and I miss a good many because I hardly know which one to shoot at. "Wes" and I went back in a field this evening for the cows and I killed eleven hares and three "partridges." "Wes" snatched my gun out of my hand in coming along the road, and fired over the heads of the cows at a "partridge" that was skimming along. It fell dead. Then we made a little detour and two got up almost under our feet. "Wes" killed one. If he had had a double barrelled gun or was familiar with my Winchester repeater, he could just as easily have killed both. You don't know what you are missing in not coming up here. When will you be with us? The big bear is still tethered back of the house. He is a savage beast, and will weigh at least 300 pounds. You know "Jim" Zabriskie. Well, "Jim" caught sight of him the other day and he came running up to the house in wild excitement for a gun. If nobody had been home Bruin might have got a thirty-eight ball in his carcass. *Geo. W. Blake.*

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LEAVENWORTH, KAN.—The Missouri Lakes afford good duck shooting. A few quail, hare and grouse may be found in the upland. A man tells me that there are more antelope in Western Kansas at present than there has been for the past ten years, owing to the settlers leaving that part of the country, which encourages the antelope to return from the southwest. Many have been seen lately near Cimarron. *Stafford.*

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BURLINGTON, VT.—Ducks are in the Winooski or Union River in great numbers, and we are bagging some. *Randolph.*

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BOZEMAN, MONT.—The West Gallatin Mountains, twenty-four miles southwest of here, abound with grizzly bear, common deer, hare and feathered game. Bozeman station is a good objective point to reach the great Yellowstone National Park or any of the celebrated hunting and fishing grounds of this great game State. Ira Doge, of Bozeman, is a reasonable and reliable guide. The four hundred miles along the Yellowstone Valley to Livingston is a good game country, abounding in elk and common deer. We are having the best outing we ever had.

Willison.

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BEAVER CITY, IND. TER.—Neutral Strip, near here, is the proper objective point for pinnated grouse ("prairie chickens"), quail and big animal game. The usual annual sport is being enjoyed; feathered game plentiful; weather grand; true sportsmen, no matter where they're from, are always treated well. *Jackson.*

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WYOMING.—We are in the Little Wolf Mountains. In this range of hills choice game may be found. Elk, mountain sheep, antelope, common deer and many species of feathered game abound.

Bentley.

—

ROCK HILL, S. C.—I have had a bad arm and done very little shooting, but quail are abundant near here. The ground has been shot over but very little, and four of our party bagged ninety-two in two days. There are geese and ducks on the Catawba River not far from Rock Hill. *W. H. C.*

Avoid putting vaseline, cuticura, or any oil or greese on your face to wear in the sun after you have once burned your face, under the impression that it will prevent sunburn. It will fairly boil, and burn your flesh like hot lead. The time to use grease for sunburn is after you are through being exposed to the sun for the day; never before. Oil your face upon going to bed, and wash it nicely in the morning before going out doors.

About the middle of November, Lorenzo Beers of Startford, Conn., sold a number of tumbler pigeons to E. M. Breadsley of Huntington, Conn. A week or more after their removal two of the birds returned to their old home, and were sent back to Mr. Breadsley, who plucked the quills from one wing of each bird as a precaution against an attempt to fly again to Startford. On the 15th of December one of the pigeons came walking down the street to Beers residence, having walked the whole distance, nine miles, from Huntington.—*Exchange.*

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INSECTS THROWING WATER.

A weeping tree is situated about one mile east of Howe, Texas, in a cow-lot owned by Ruben Harrold. This phenomenon commenced three years ago, and it has been actually raining under the tree incessantly ever since. In cloudy weather there is always a heavy mist falling from the tree, but in hot, dry, sunshiny weather large drops come down which would soon wet one's clothing through and through. The tree has always been a profuse bearer of leaves until this spring, when it did not bud out at all, and now it has every appearance of being dead, although the rain, or whatever one may please to call it, continues to fall from the branches as usual.—*The Metropolis.*

Every day last week what appeared to be a wonderful phenomenon was witnessed by hundreds of persons in the garden attached to the residence of Rev. Dr. Edmunds, pastor of the Presbyterian church at Sumter. Beginning at about 5 o'clock p. m. of each day, rain apparently fell continuously for about three-quarters of an hour in one spot about 50 feet in diameter, while elsewhere not a drop of rain could be observed. The weather was clear and fair and there were no trees overhead. Water unquestionably fell in the form of rain. Several persons stretched forth their hand and caught the drops as they fell and were convinced. Diligent investigation failed to discover anything that could suggest a rational explanation of the mystery. Dr. Edwards, however, has at last found what he believes to be the source of the mysterious water supply. He has discovered that on a fruit tree, not far from where the water falls, is a number of little insects that throw out jets of water from their tails. They evidently get the water by sucking the sap of the tree. When the water is thus emitted it forms into drops and falls in the manner of rain from vapor. The insect is described as a brilliantly variegated butterfly. This solution of the Sumter mystery satisfactorily explains the phenomena of the raining trees reported in various sections in this State in the fall of 1886, soon after the earthquake and by many superstitious people connected with that disturbance.—*Columbia Dispatch.*

FLOWERS OF DEATH.

A Russian journal devoted to the industrial interests of the Caucasus thus describes the cultivation of the pyrethrum plant:

"The flowers of the pyrethrum (*Pyrethrum roseum*) are used in making the powder, which is sold under various names—'insect powder,' 'Persian powder,' 'death to insects," etc. In Europe these flowers are only found in Dalmatia, but these are white, and not rose-violet, like these of the Caucasus. The Dalmatian pyrethrum is greatly appreciated, and when its crop is scarce the Caucasian flowers are eagerly sought for, and their price increases by from 200 to 300 per cent.; this was the case in 1887 and 1888. Prices, which had varied between three and seven roubles for the previous ten years, reached all at once, in 1887, 15 and 16 roubles at Tiflis. Formerly a certain quantity of pyrethrum in powder was exported from the Caucasus, but Europeans were not satisfied with receiving this delicate article in this form, because it was discovered to be mixed with foreign substances, and growers in the Caucasus could not reduce it to the impalpable state requisite to preserve its efficacy. At the present time the flowers only are exported. It is necessary they should be cut as short as possible at the stalk, gathered when ripe, dried in the shade and in a current of air, because in the sun the bloom and rose color are lost, and lastly, that they should be mixed with other herbs when being gathered. Recently a fraud has been noticed in the packages of Caucasian flowers, other flowers resembling the pyrethrum and dyed the same color being found. The exports amounted to between 176,000 and 200,000 kilogrammes last year; of those three-fourths were badly prepared, the season having been a very rainy one."

In Australia they are trying every means to rid the country of the swarming number of hares, and in England a means to abate an epidemic among hares is being sought for. "The park lands and higher allotments, known as Knipe Scaur, says *Land and Water*, where several coursing meetings were annually held, were remarkably well stocked with hares. An epidemic broke out amongst them, and they died so rapidly that hardly a single hare was left. Lately the epidemic has broken out with, if possible, increased virulence, and, in their daily walks, the keepers come across scores of dead hares." England and Australia should exchange a few specimens, England receiving a few of the swarm-breeders and Australia one or two of the fluke infested order.

NATURAL SCULPTURES OF THE COLORADO.

The rock sculptures of the Peach Spring Cañon of the Colorado river must be something marvellous beyond description. A correspondent of the *American Register* (Paris), writes:

"The length of the cañon is 325 miles, and the highest cliffs rise to 7,800 feet. Some of the principal ruins—this word seems to be the only word to apply to them—have been named from time to time, and for the most part with fitness. One is Solomon's Temple, another The Pyramid, another Sunset Peak, and still others The Sphinx, Westminster Abbey, The Beehive, etc. Solomon's Temple is considerably over a mile high, and the denudation and wearing of the rock by water has been such that it represents an enormous pile of architecture, with sculptured bastions, harmonious in its proportions, with great terraces at its base, and growing smaller toward the top. On the very top, in the centre, is a pyramidal peak in exact proportions. This sculptured pile is from two to four miles across the *façade* and to see these things standing up and against the clear, cloudless blue of the Arizona sky, produces, as you may well imagine, an indescribable effect. "Sunset Peak" goes up like a dome 6,000 feet, and when the sun sets clear, and has entirely disappeared behind the mountains, its reflected light rests on this topmost peak, and transforms it into a minaret of gold—a heavenly light, indeed. Another architectural piece goes by the name of "Babel's Tower," and is 5,000 feet high, and this has beautiful sculptured buttresses. "The Castle on the Rhine," is the same height. "The Pyramid" is 4,200 feet above the river, and the river is 1,130 feet above the sea. Some of these cliffs of even terraces and strata rise almost perpendicularly to a height of 2,500 feet, and as high up as the eye can detect a variety of plants, including cacti, perch and thrive in the crevices. Some varieties of flowers bloom the year around in the cañon, so mild is the temperature, even in mid-winter. It promises to become a great winter resort for invalids, as the air is perfectly dry and pure and at a low altitude—most dry air latitudes being of such high altitude as to affect the nervous system.

Of course, it is impossible for any visitor to appreciate the magnitude of this scene of ruin and desolation, where one fairly sees where the foundations of the world were laid. When we began our up-grade ride out of the cañon it was half past four in the afternoon, and since the previous morning the mighty walls had grown to twice their height of the previous day. The chimney on the top of a perfect pyramid, that was sixty feet square by actual measurement, looked to be the size of an ordinary chimney. The full beauty of "Westminster Abbey" comes into view in this outward ride, and its likeness to its venerable, ivy-grown namesake is very striking, only it is a far more wonderful structure. Just before reaching it, and on the same side of the cañon, is the "Temple of Jupiter," and it is unquestionably one of, if not the finest, parts of the cañon. It is a mighty pile of stupendous harmony and sculpturing, the central *façade* bearing a multitude of sphinxes and classical images. On the opposite side is "Moses Striking the Rock," the outline of the great statue at one point being very life-like. On the top of one cliff is "The Prophet at Prayer"—a kneeling figure with upstretched hands—and there are many features not yet named, awaiting christening from the clever and acute visitors yet to come."

THE CAUSES OF THUNDER.

Professor Hirn concisely treats the subject of the causes of thunder thus:

"The sound which is known as thunder is due simply to the fact that the air traversed by an electric spark—that is, a flash of lightning—is suddenly raised to a very high temperature, and has its volume considerably increased. The column of gas thus suddenly heated and expanded is sometimes several miles long, and as the duration of the flash is not even a millionth of a second, it follows that the noise bursts forth at once from the whole column, though for an observer in any one place, it commences where the lightning is at the least distance.

"The beginning of the thunder clap gives us the minimum distance of the lightning, and the length of the thunder clap gives us the length of the column. When a flash of lightning strikes the ground, it is not necessarily from the place struck that the first noise is heard. A bullet whistles in traversing the air, so that we can, to a certain extent, follow its flight, the same thing also happening with a falling meteorite just before striking the earth. The noise actually heard has been compared to the sound produced when one tears linen. It is due really to the fact that the air rapidly pushed on one side in front of the projectile, whether bullet or meteorite, quickly rushes back to fill the gap left in the rear."

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Nature.

Far in thy broad domains, thy kingdoms grand,
  Eternal Nature, it is sweet to roam;
In boundless precincts of the natural world
  We find a welcome and a gracious home.
The swift years come and go in endless round;
  Fleet glide the generations of mankind;
The peoples that inhabit this vast globe
  Vanish like shades, and leave no trace behind.
Immortal Nature still remains the same,
  The centuries leave no impress on her face;
She sepulchres in dust the world of men,
  Spreads her green hillocks o'er the buried race;
But few mutations of the Ages cast
  Their wasteful shadows o'er her features mild;
The mountains soar forever in the skies,
  Stupendous, grand, majestically wild.

Nature eternal, unchangeable in form,
  Opes wide her golden gates to welcome there;
She bids her guests to taste her royal feasts,
  Her lavish, bounteous banquetings to share.
She spreads in endless leagues her forests wide,
  Her boundless labyrinths of solemn shades,
Whose arch'd columnar aisles and fretted roofs
  A dim, religious solitude pervades.

Along her mountain ranges soar the groves
  Of the great redwood and the spiring pines,
The balsam-fir and hemlocks dense in shade,
  The elm trees garlanded with trailing vines;
And far in southern climes the bowery swamps,
  Where oak-groves spread, drap'd with the Spanish moss,
The sweet magnolias and the palm trees tall
  That in each breeze their emerald branches toss.

Fair scenes she casts from her celestial urn,
  When silvery-bright and purple-hued the skies
Of Heaven shed down their glories o'er the earth.
  The summer greenery and autumnal dyes,
The spring time promise and hot August's prime,
  Adorn the earth with matchless wilding flowers,
Ripen all fruitage of the genial time,
  Engarlanding with vines the wildwood bowers;
Rich autumn pours from its resplendent urn
All prismy tints that in the rainbow burn.

Boon Nature with enchantment thrills the mind!
  Woods, waters, meads and wildernesses green,
Where brilliant flowers their garlands intertwine
  To charm the sense in each Elysian scene.
Far in the south, in mangrove swamps, the fish
  Lash the blue waters in their wanton sweep.
The silvery tarpon and the channel bass
  Entice the angler to the salty deep.
She loads our orchards with luxurious fruits,
  She paints with gold the harvest's yellowing grain,
In autumn tints with red the maple boughs,
  Touches the hickory groves with yellow stain,
Brightens the poplars and the oaks of brown,
Engilds the willows with a golden crown.

Nature o'er all this wide extended realm
  Enchants with mountains grand and rivers deep,
Engirds the Alleghanies with forests grand
  And Rocky Mountains with precipices steep,
Pours thro' deep vales the Mississippi flood,
  The swift Ohio and Missouri Grand,
In wide expanse outspreads Superior's lake
  And Huron waves, that wash the western strand.

In the deep woods and o'er those valleys green,
  In herbless wastes and wildernesses grim,
Where granite cliffs their rugged ramparts raise,
  In rocky gulch, wild gorge and ravines dim,
The bold frontiersman and brave foresters
Seek out the savage creatures of the wild,
The elk, the moose, the growling grizzly bear,
That in those fastnesses make lonely lair;
And o'er the grassy plains that stretch around
  They hunt the antelope and antler'd deer;
But long since have the shaggy bison fled,
  Slain by the rifle and the Indian spear.

In many streams o'er Nature's broad domain.
  In placid lake and brook and ample bay,
Where leap the salmon, bass and spangled trout,
  The angler finds his joyous holiday,
Reaping the harvests of the watery plain,
From the Pacific to the Atlantic main.

Isaac McLellan.

First and foremost among our bird helpers is the purple martin. It is the general impression that this bird takes insects only on the wing, but it does more than this. I saw numbers of them this past summer taking the rose-bugs from the grapevines. They swooped down and picked them off without alighting. They circled around in companies, back again to the same vine, each one snatching off a bug as it passed. And not only the rose-bug falls a victim to its appetite, but it even stoops to take the potato-beetle. Put up boxes for the martins, and see that the English sparrow does not get possession.—*Mary Treat in The Agriculturist.*

THE STAGE.

Ben Jonson's poetical preface to the first edition of Shakespeare's works, published in 1623, has it:

"Yet must I not give Nature all; thy Art,
My gentle Shakespeare, must enjoy a part;
For though the Poet's matter Nature be,
His Art doth give the Fashion."

Nature, then, *has* indoor work to do, and the key used, musically speaking, should be *natural*, that is, with neither a sharp or a flat for its signature. Naturalness, more than anything else has improved the stage of to-day, and a stilted Richard III, who would snap the "Now" of the winter of his discontent, at the audience, would be laughed at, before he finished chewing the end of his soliloquy and began on the scenery. Perhaps, that is the reason of the unequivocal triumph of Mr. Richard Mansfield's splendid restoration of *Richard* last week at the Boston Globe. He has never seen anyone play the part, therefore was not hampered with "traditions." He pulled the humpbacked and snarling monarch out of the twilight of history into the broad sunlight of to-day—in fact infused life and blood into him, and made him a man consistant with nature, and although surrounded with prodigious magnificence, the places and persons were those implicated in the story, and hailed neither from Cockneyland or the Bowery.

* * *

Mr. Booth's great popularity and his towering reputation makes comment on his acting seem presumptuous, and yet of late years he grows more and more unnatural. He walks through his part without caring to exert himself, and conveys the idea that he has played the character he assumes so often that he is tired of it. He was never a good *Richelieu* at his best, but his last appearance at the Broadway in that role was a disappointment to even his greatest admirers. This may have been partly due to his joint star Mme. Modjeska, who is too old to play *Julia*, or perhaps to a change of taste in the public, who do not care any longer to see even precious gems in old settings or cut in old fashioned facets. Neither he or Salvini have had the audience in New York that in former years flocked to see them, while Denman Thompson in "The Old Homestead," three small natural sketches of real life strung together, is able to fill one of the largest houses in the country every evening for years.

* * *

Mr. Joseph Jefferson's entirely natural and magnificent acting in "The Rivals," and the great crowd he draws whenever he appears in New York, or anywhere else, is also proof that perfect naturalness in acting is at present most popular, and nowhere, in this country or in any other, is there a more easy and natural comedian on the stage. He suffers too from a joint star, who announces that he played *Sir Lucius O. Trigger* a generation ago, and that the generation to come will call his present creation "great." Perhaps it may, but this generation objects to any such Irishman as the erudite comedian evolves, and more, they desire, if *Sir Lucius* begins with a rich Corkonian brogue that he does not finish with a Lancaster dialect. Everyone compares Mr. Florence's *Sir Lucius* with that of Mr. Floyd or John Brougham, not because of "tradition," but because both of these great actors played the part naturally. They went through it, feeling the part in every word, and *Sir Lucius* lived in them and oozed out without effort. Mr. Florence works hard with his part no doubt, but it is strained, and the Irishman is a sorry one of his kind.

* * *

Perhaps Americans should throw a rose in the path of the Kendals. For my part I am willing to throw a whole bunch of nosegays as large as those Mr. Rudolph Aronson orders for Miss Lillian Russell or Pauline Hall, at the first performance of a new opera, but at the same time, so far neither Mr. or Mrs. Kendal have done anything to warrant us in re-echoing the praise which London gives them. Both no doubt know their art perfectly, and act well, but I have never felt like drawing even my *boutonniere*. In what the lady is great I have not yet discovered. She is certainly not natural. As *Claire*, when her husband the Ironmaster discovers he is not loved, Mrs. Kendal's acting is absurd. During this scene, when her husband (in the play) grows angry, she turns her back to the audience, throws her blonde wig'd head backward, until the audience discovers her broad forehead, and in this position she stands for many seconds looking up at the flies. What particular emotion she wishes to portray in this is impossible to conjecture, unless she is afraid that something may drop on her, and were she not the great English favorite, but an unknown American making her debut, something would. Mr. Kendal, I am told claims no honor particularly. He is however a fine looking man, and the pair are very respectable actors. What they have done has however been several times done much better here, and a better supporting company could be picked up any sunny afternoon on Broadway, between Twenty-third and Thirty-second street.

* * *

Towards the end of Mr. Dixey's fantastic "Seven Ages" he suddenly drops down from his fly at clever burlesque and drops into "the lean and slipperd pantaloon," a neat bit of comedy, so charmingly natural as to make it the brightest spot in his latest success. In all the clever things that proceed it, this touch of nature which makes "the world kin," crowns the artistic career of this young actor. The "childish treble," the "shrunk shanks," all shows the end of his "eventful history," and it scores, because it is natural. It touches the heartstrings of everyone in the play-house, because he infuses his art with Nature, pure and simple, and the artist that does this is sure of success.

A. P. Dunlop.

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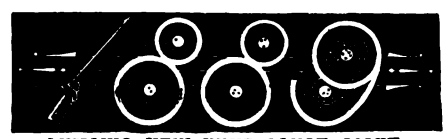

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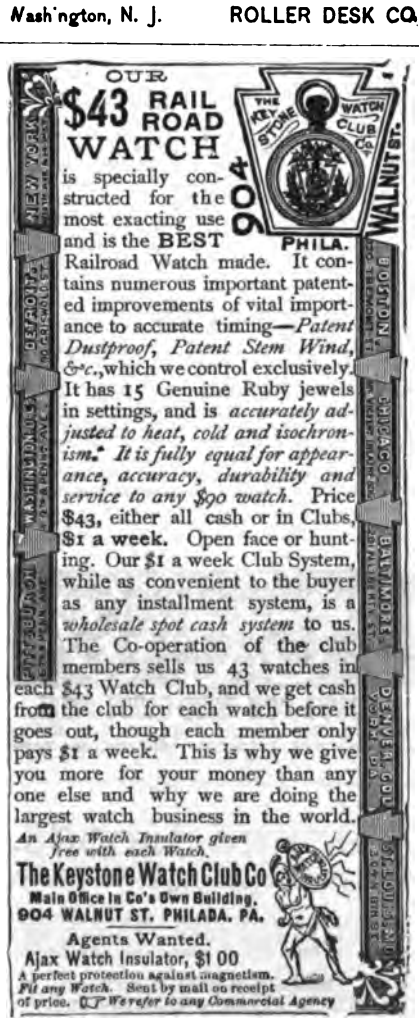

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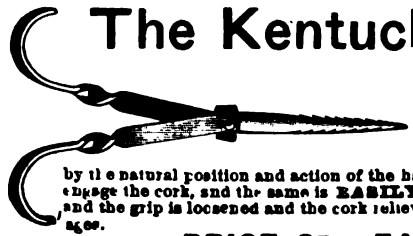

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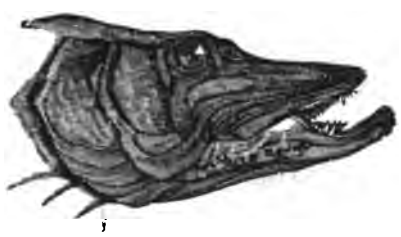

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A Weekly Journal for the Gentleman Sportsman and Naturalist.

Issued Every Saturday.

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CHARLES HALLOCK, author of the "Sportsman's Gazetteer," "Fishing Tourist," "Camp Life in Florida," "Dog Fanciers' Directory," "Our New Alaska," "Vacation Rambles in Michigan," etc.

CHAS. BARKER BRADFORD, the well-known all-round sportsman writer and author of "Black Bass Fishing," "Diana's Dream," "Nimrod and the Gentle Art," etc.

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A Weekly Journal for the Gentleman Sportsman, Tourist and Naturalist

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NATURE,

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Contributing Editors:

WILLIAM C. HARRIS. CHARLES HALLOCK.
CHAS. BARKER BRADFORD. J. CHARLES DAVIS.

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TEXAS is the delight of the hunter and sportsman. In mountain, plain, forest, thicket, prairie field and stream are to be found worthy objects of his pursuit. Even some buffalo still stalk with stately grandeur over the vast plains of Northwestern Texas. There are also to be found the black-tailed deer and elk. The antelope is abundant on the western and northwestern frontiers. The common deer is still to be found in the forests of nearly all the settled counties, and are abundant in sparsely populated regions. Reynard has his lair in many a brush. In the deep forest bottoms and thickets, the bear, panther, catamount and wildcat give the adventurous hunter a taste of danger. On the plains near the Rio Grande border the Mexican lion roameth, when the gentle shepherd is not around with his rifle. The wolf has been made scarce. The mule-eared rabbit courses over the prairie plains as fleet as an Arabian but not so long-winded. This animal is very much like the hare. The swamp and field rabbit and gray and fox squirrel, though deemed beneath the notice of the sportsman, afford the boys fine fun and good practice.

NATURE is one of the most artistically arranged sheets ever put upon a news stand. It is ably edited and full of information such as a thorough sportsman enjoys.—*New York Sportsman.*

"AUDUBON, the bird lover," says Mrs. Walker, "lived with us eight months, but during the greater part of the time was wandering all over the country, walking almost the entire time. No insect, worm, reptile, bird or animal escaped his notice. He would make a collection, return home and study the specimens. He was handsome in face and figure and very winning in his speech." We have an oil painting of the great naturalist, not a very good one, but the hair, *the eyes*, the mouth and the nose are all Audubon's.

THE fine Roman amphitheatre at Pola, in Austria, on the Adriatic, suddenly collapsed one day and fell into an immense chasm which opened on the site. From this chasm vapors are emitted.

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BIOLOGY OF THE COSMOS.

The subtle Principle of Life pervades the Universe. It permeates its most comminuted parts as well as the integral whole. It pertains no less to the incipient spore than to the mature and ultimately developed growth. It is manifest in all organic matter, whether it be of plant or animal, from the so-called protoplasm to superlative man.

Primarily, the Earth was a chaotic embryo, or cell, without form and void, like all other protoplasmic germs. Invested with the principle of life it became a World. By the same creative agency Man was formed of the cosmic dust, and after he had likewise received the breath of life he became "a living soul." All cosmic material is identical, whether it be in the form of animals, plants or stones. No matter what metamorphoses matter may take or however it may disintegrate or decay, the principle of life remains inherent, and will continue and proceed. Wherefore there is substantially no death, that is, no literal ceasing to exist, and there never can be, for death is merely an incident to a metamorphosis. Intrinsically, it is a temporary suspensiou of animation.

Unity in nature is everywhere apparent. The primordial unit, as well as its parts, parasites, projections, and emanations, are all alike subject to the same courses and the same destiny. All are involved in a common fate. This is the testimony through all the ages. There is no incoherency in the plan of creation. There is a manifest oneness of purpose, one entity, one systematic design and one uniform tendency. Moreover, Biblical cosmogany declares that all things terrestrial shall be simultaneously destroyed at a last day; or rather, that they shall be changed, and that the Earth shall be resolved into its constituent elements by fire. Science readily accepts this theory. Logically, then, if all created things are "of the earth, earthy," and the principle of life imbues all things, the Cosmos itself is as much an organic body as any living thing upon its surface, and we may speak as properly of the biology of the earth as of the biology of man, out of whose dust he was formed. Either we must recognize our kinship with "Mother Earth," of which the psalmists and poets have so much delighted to speak, or else we must repudiate it. If we accept it we practically admit identity of substance and may reasonably be indulged in some speculation in regard to the world's physiology.

The tendency of the human mind has always been, from earliest historical time, toward a recognition of a terrestrial personality. At one period Cosmotology or Earth worship was widely prevalent. Not only were human but divine attributes ascribed to the Cosmos, and men even went so far as to sacrifice their own kindred as propitiatory offerings to it. The personification of the Earth and its most attractive objects has afforded a constant theme for poets and inspired writers, who never tire of allegorical reference to the relationship of mankind to it and them. The sublimest language of the Psalms is embodied in an apostrophe to the hills and mountains, and an invocation to them to lift up their hands in praise of their Creator.

Genesis affords a concise though graphic sketch of the evolution of the Earth from its protoplasmic state throughout its six first great formative epochs. The developments which have since taken place to bring it to its present perfection of fitness and beauty have been remarkable, even within the range of recent history. Scripture tradition says it was originally "without form and void." The ancient Greeks, who seem to have had about as correct a conception of inscrutable things as modern gnostics or agnostics have, described it as "an egg floating in the sea of chaos." In India, China, and Egypt, as well as in Greece, this cosmical egg was ever prominent in architecture as symbolic of Creation. And what physicists of any age or epoch, inspired or otherwise, we may ask, have ever come nearer the truth?—that is, if analogies in nature are to hold good throughout the entire universe?

Not many months ago the Biological Society of Washington listened to a lecture given by Professor Seaman, which illustrated in a most impressive way what might be called the *principle of life*. To the unsophisticated mind the revelation was replete with marvels. In the search-

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ing light of the stereopticon the illuminated field was animate with marine protozoic cells, floating, as it were, in "a sea of chaos," singly, in groups, in clusters, in constellations. Imagination pictured each living germ ablaze with marine phosphoresence, and looking heavenward discovered them all reflected in the firmament above. Venus, a shining world like ours, the Earth itself, Orion, the Pleiades and the nebulous Milky-way, star answering to star, all coördinate, some revolving compactly around a central orb, some drifting away in scattered and erratic courses, and all attracted or repelled by various controlling influences toward or from each other, with the great majority in constant motion, changing form as well as place. And the intent observer of protozoic life, patiently and closely watching, and permitting no iota of each life history to lapse from view, discovers here and there upon the microscopic field some protoplasmic cell—egg-shaped like the Earth—putting forth projections from its pulsating selvedges in the primal efforts of development. After a period corrugations appear upon its surface. Later on a muscle is developed in this part and otherwhere a rib. Organs begin to be defined and functions are set in motion. In the course of time exquisite transformations are unfolded and results appear which the wisdom of mundane sages cannot comprehend or interpret. Just so the cosmical cell, which at first was without form and void, and erstwhile floating in the sea of chaos with innumerable other stellar cells and incipient worlds like it, gradually developed by successive stages into a world of beauty and becomes a Terrestrial Physicosm.

Biologists tell us that it is difficult to draw the line between the animal and vegetable kingdoms, so intimately do they blend. Equally difficult is the demarcation between the human and the brute creation; and there are those in sacred history who bear witness to the intussusception of the human and divine. Is it not possible to go lower as well as higher and find a composite between the organic and inorganic? What defines or separates the two? What divides inert matter from the sentient? Scripture calls it the "breath of life." A corpse is dead matter, which, decaying, goes to dust. Vivified, it is a living creature. What are the evidences of life? Palpable inherent heat and pulsation. Then behold them present in our Physicosm! Cosmic physiology discovers at the Equator the plexus of a great circulatory system whose pulsations are as regular as the human heart-beat, with the warm arterial currents flowing outward to its polar extremities, and the colder venous currents returning with the same steadfast uniformity from the antipodes; the swell of the ocean conforming to the pulsation of the tides like the heaving of the human bosom in respiration. The Cosmic heart has two auricles and two distinct arterial currents, the Kuro-Siwa and the Gulf Stream; and these arterial currents and all the arctic counter-currents are operated upon by influences which cause variations of temperature at the centre and extremeties, just as in the human body; and when the circulation is deranged the whole body suffers. The Earth has the same proportions of water as the human body and the same proportions of organic matter, which comprises the same chemical constituents, salts, phosphates, etc. The Earth has corresponding organs and functions and is subject to the same corporeal disorders. It has lungs, bowels, nerve centres and secretory glands, with bladders, sacs and pockets to retain the fluids, and vents for their discharge. Geysers, craters, sink-holes and tunnels constitute their connecting passages, and hot water, asphaltum, paraffine and salt solutions appear in the outflow, with foecal extrusions, intermittent or sporadic, according as the body is in a normal or disordered state. The Earth has peristaltic action and digestion, thirst and hunger, constipation, body gases, flatulence, rumblings in the bowels and detonations of varying quality, intensity and significance. It is subject to convulsions from internal or external causes—from forces magnetic, dynamic, electric, capillary, etc., which are attended by phenomena familiar to the every-day economy of the human system. It has its agues, tremors, intermittent fevers, paralysis and labor pains, which, in poems, give birth to mountains. Excresences crop out upon its surface, subterranean veins course through it, boils afflict it, fungus grows rank upon it, parasites infest it. It has absorbtion, respiration, exhalations, perspiration, body odors, eructations. And speaking of perspiration, only lately have physicists discovered that the dew upon its surface, instead of falling from the atmosphere above, was really the transpired humor from its body. The Earth has also its emotions and its moods, its periods of calm and irritation, its aspects of severity and serenity, of parsimony and beneficence, of beauty and of gloom. So near, indeed, are the macrocosm and the microcosm kin that one cannot be described except in the similitude of the other, with the attributes of both in juxtaposition, so that he has always been the most exalted poet who could merge, transpose and blend their personality in metaphor and trope.

The structural anatomy of the Cosmos is not apparent on its surface—no more than the anatomy of an echinoderm, which it much resembles in shape and general appearance, the principal part of its framework and internal economy being hidden within its calcareous envelope. The ancients sometimes likened it to a tortoise, which is not a bad comparison, though the ovate egg typified in the echinus is much nearer the similitude and the fact.

In Paris there was at the Exposition a terrestrial globe forty feet in diameter, scaled to proportions of one-millionth, which is the smallest that can convey to the human mind an adequate idea of relative dimensions. Upon its surface the ravines and cañons appear like carvings, and the continental mountain ranges of the rock-ribbed earth are shown in mean projection about five inches high, representing an average elevation of 2,250 feet, the serrations of the loftier peaks answering to spinal processes, or more nearly to the ambulacral zones which rib the body walls of the trepang (our echinoderm) in longitudinal series. The coincidence in position and number of these ridges is noticeable, there being five in each. The ridges or ribs greatly strengthen the crust or envelope of the terrestrial cell, while the greater width and depth of the ocean hollows permit easy flexures in the adjustment of the ever-changing crust. Through the fissures which are constantly occuring in the process of shrinkage, the sea water pours into the interior of the globe, and being heated there by inherent caloric, reappears in the form of thermal ejections and insensible perspirations, which, gathering body by accumulation and precipitation, are again returned to the ocean to promote the circulation.

This analysis might be pursued further, and analogies traced with perhaps increasing interest, but so far it will suffice to make a strong case in behalf of the physiological character of the Earth. It would seem as if the Earth and Man had a common origin and a common end. Theology and science both agree that the end must be destruction and death, in the constituted order of things; and as the seed cannot germinate and live except it die, so through death will come a resurrection and a reconstructed world. Man and Earth return to dust disintegrated but not annihilated. Eventually they must enter upon a new cycle of development, newly created and born again, materially, just as progressive man must be re-born spiritually. Whence comes the vivifying spark? Was it not "in the beginning"? Was it not inherent in the so-called principle of life? Life is knowledge. The germ of life is intelligence, and knowledge is intelligence in different stages of development. When fully developed it becomes Omniscience. Omniscience fills the universe and controls it. The soul of man is the spiritual reflection of the principle of life. It is progressing gradually toward the sublime climax of Omniscience, and the Earth is gradually advancing toward that equally indefinable place or condition known as Heaven. This is the biology of the Cosmos: The principle of life fills the Earth as Omniscience fills the Universe, and the one is subject to the other.

Charles Hallock.

THE DRIVER ANTS.

The most formidable of the insect pests that affect the dwellers of the West African coast is the driver ants. These insects move in vast armies of several millions, marching in a dense column two feet in width, at a uniform pace, and in a straight line.

If a native hut lies in their path, and the inmates fail to prevent the ants from gaining the threshold, the hut must be vacated till the long line has passed through and consumed everything eatable within the building.

The author of "Glimpses of Feverland" says that the only thing which will stop the "drivers" is a large fire directly in their line of march. A native, when he discovers in time that the ants are marching towards his hut, kindles a fire in front of the advancing column. It turns neither to the right nor to the left, but plunges into the flames. for every ant seems impelled to go forward, no matter at what cost.

After the "drivers" have walked into the fire for an hour or two, and several hundred thousands have been consumed, their sturdy stoicism weakens. They deflect their line to the extent of a few feet, and, passing the fire; set out on a fresh path of destruction, which leads them clear of the hut they had threatened.—*Youths' Companion.*

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Baccarole in Deciduous Days.

On the hillside, on the hillside,
In the keen November blowing;
By the rillside, by the rillside,
Down the beech-flanked courses flowing;
At each rustling stir
Hear the partridge whirr,
Fleet hoofs see the dun deer showing!

Round the islands, round the islands,
Where the sheldrakes pause and preen them;
Past the highlands, past the highlands,
Where 'mid pine boughs squirrels screen them.
O'er the rippled lake,
Our calm course we take,
While the oars flash duets between them.

When the light frost, when the white frost
Glints o'er stubbled glades at morning,
When the night frost, when the tight frost
Gives the huntsman winter's warning.
In vermeil and rose,
At day's dawn and close,
Sky and mere claim the sun's adorning!

Must we go then, must we go then
From these scenes where peace has brooded?
Let us row then, let us row then
Past the inlets and groves denuded.
'Twas a dream, I fear;
Were love ever near,
Could two dwell in these wilds secluded?

John Moran

The Adirondacks, November, 1889.

ORCHARDS IN OLD MINING CAMPS.

One of the curious results of the decay of placer and hydraulic mining in the foothill region is the development of orchards where it was once thought the only valuable thing the earth produced was gold. In Butte, Yuba, Amador, El Dorado, Placer, Nevada, Calaveras, Stanislaus and Tuolumne—the seat of the richest early placer mining—the chief industry now is fruit-growing. These steep foot-hills, which were once looked upon as worthless, are now being planted to vines and the choicest fruits. It is found that this land, which has received for ages the wash from the tops of the mountains, possesses some peculiar properties in which the richer valley soil is deficient, For choice European wine grapes it is unsurpassed, and for all kinds of fruits it is specially fitted, as it gives a flavor that can never be gained on the irrigated land. An old miner who has worked in any of these counties fancies he is dreaming when he revisits his old haunts. When he left the places where he had worked presented a good subject for a picture of the abomination of desolation. The hydraulic miner literally tore up the surface of the earth and left as complete destruction in his path as an army that intrenches itself against attack. Wherever he worked hills were laid low, and great unsightly pits yawned where he removed the pay dirt clear to the bed rock. In other places great ugly heaps of gravel and cobble stone showed the fruits of his activity. Nature, however, has been kind, and chaparral covers most of these scarred fields, while others are smiling with orchards and vineyards. It is one of the modern miracles in California—as great a wonder as gathering figs from thistles.—*St. Louis Globe.*

The physicians of a lunatic asylum have found a new use for hares. A number of these little creatures have been turned loose into the fields adjoining the institution, so that the inmates will be amused by seeing the animals run about, and to divert the minds of the patients is one of the great objects of the asylum.

THE New York *Evening Telegram* of November 8 welcomes NATURE with these kind words: "NATURE is a very handsome periodical, the cover being beautifully illustrated with forest and mountain scenery, while the reading matter is interesting. Besides articles savoring of the field and river, useful hints are given amateurs as regards the use of guns and rods. The paper undoubtedly will quickly find favor among sportsmen."

THE ANGLERS AND THEIR FRIENDS.

George Blake, George Lyon and Barker Bradford went angling—not fishing, Bradford says—one day at Milton Lake in Jersey, where black bass are said, but not known, to be numerous. They angled the lake all the morning and part of the afternoon without a bite—a bite from bass or a bite to eat. The three grew very hungry, and they became sun-burned, mosquito-bitten, wet, tired and dirty. At 2 o'clock they packed up their impedimenta and started for the village to eat and agree upon the style and strength of fish story to tell Newton Bigoney, Frank Mack, Edward Morphy and Charles Kemp, all of whom were waiting at the boys' flat, where a bass dinner was to be served on the bass the journalist-anglers were to take at the lake.

They met a man on the way to the village.

"Ketch enythin'?" said the man.

"Nothing to catch," said the anglers.

"Wat bait did yer hav'?" said the man.

"Everything—all kinds of flies, trolling spoons, frogs, worms, beetles, minnows, grubs; tried 'em all; no fish in the lake," said Lyon.

"Ye tried all but th' right thing, gol durn ef ye didn't," quoth the man.

"For Heaven's sake, what is it?" exclaimed Blake.

"Gressheppers," said the villager, "never fail; children ketch the durned 'Swegos with gressheppers; easiest thing in the world. Ye city fellers ain't smeart 'tall."

The anglers retraced their steps after dinner and renewed theis piscatorial efforts, baiting this time with "gressheppers."

Two hours more in the sun without a catch made the anglers—not fishermen—think themselves they weren't "smeart" indeed.

"We'll string no fish after all," said Blake.

"No," returned Lyon; "Bradford and that 'gresshepper' individual did all the stringing. Let's go home."

And the angling trio again single-filed toward the village, and they met another man on the way.

"Ketch enythin'?" said the other man.

"Nothing up there to catch," said the trio.

"When'd ye fish?" said the other man.

"All day, and with all kinds of bait, and didn't get a bite."

"Didn't ye fish last night?" asked the other man.

"No," said the trio; "began this morning and are just through."

"Wal, dear me, suz, ain't ye durned fools to come 'way jest as the 'Swegos begin ter bite; Milton 'Swegos never bite till 'bout this time up ter pitch dark; ye got theare when fishin' weare over and kem 'way jes as it's 'bout ter bristle up. Neow's jes the time, ba gosh."

And the anglers went back still again and angled still without success until it was dark, and the night mosquito force came on and drove them off.

While on the way to the village they met—no, they did not meet, they saw—another man. When they saw him through the mosquitos about twenty feet away they hustled over a fence and quickened their pace, faintly hearing in the distance and the darkness as they did so, "Ketch enythin'?"

Thrice was enough for them.

* * * * * * *

It was Saturday night, and the fish stands in Tompkins Market were open late. Three blistered anglers dropped off a street car at the first entrance. One sat down on the steps and the others delivered into his care their rods and satchels and went into the market.

"Don't put 'em in a paper," said one of the blistered three to the fish dealer; "can't you string 'em on a line?"

And the dealer did it without a smile and made the buyers happy.

"I see," said he. "You want 'em to look like fish caught with rod and line and not as though they were bought; that's easy; often do that."

And the fish were strung, not as the anglers had been, but upon a line, and subsequently eaten by the anglers and their friends.

Allan Forman

NORTH CAROLINA.—The Pamlico river district, reached from Norfolk's, a great resort for wild fowl; and you will find deer, turkeys and quail here, too. Near Rockingham—quail; near Belvidere—deer, bear, hare, squirrels and feathered game; near Tarborough and adjacent points—quail. *John.*

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The Dusky Duck.

Within the blind, before 'tis light,
I take my place to watch, and wait
The coming of the morning flight
Of dusky ducks, to meet their fate.
The mist against the eastern sky
Is rising now; as breaks the day
The gloom is fading into light,
The horizon is streaked with gray.

I think that np the stream I see
A welcome sight, as in the air
A speck appears; yes, one, two, three,
Nine large black ducks toward me bear.
My trusty "Scott" with trembling hands
I closer grip, and try to calm
My beating heart, while on the sands
I lower crouch, so that the charm
May not be broken; now the flock
Is surely coming to the blind;
My heart stops beating; here they come
On whirring pinions like the wind.
Just as they turn my right speaks out,
And bang! spat! spat! now two ducks fall.
Then with the left through smoke and doubt
I speak, two answers to the call.

Two shots, four ducks, with rapture held,
There's nothing more I can desire.

* * * *

My wife at once the dream dispelled
With "Come, get up and make the fire."

Reuben Harwood

FLY FISHING FOR BLACK BASS.

[CONTINUED FROM PAGE 36.]

As our three anglers waded into the water, the wind freshened and whirled around the bend of the river in fitful gusts, striking them upon the "starboard quarter," as the sailor has it. This induced casts to the right, and called for a strong wrist movement in order to lay the line well out athwart the breeze, which would sometimes catch the flies in their forward cast, tossing them upward and often holding them there suspended and floating, feather-like, until a slight lull would land them gently as a snow flake falling upon the ruffled river.

Harry was to make straight across the stream to fish the right bank of it, Gill to fish the left side, and Mendy chose mid-stream.

The direction and wayward nature of the wind was, to a rod expert, nervy and exciting. To a bungler it was confusion and failure. Let us watch Harry a moment.

Holding the rod just above the reel in his right hand, with the thumb extended and fingers closely clasped, but not rigidly, his cast of flies being held meanwhile in the left hand, and the rod nearly perpendicular, by an appreciable movement of the wrist from left to right he gave the tip of his rod a *flirt* and the line and leader curled backward, lengthening out behind him. Then without a turn of the eye (it was intuition that told him that his rear cast was ended), he reversed the movement of his wrist, *springing* the rod to the front, and the flies fluttering fell within an inch of the spot which his judgment had told him was a likely one.

Harry ignored the traditionary teachings of the craft, by his disbelief in the "forty-five degree" angle doctrine.

"Herbert, Norris, Scott, and the rest of them," he said during a camp fire talk, "*may* have found it all right, but boys, I think that many of our angling lessons, as taught in the books, are laid down on the principle of follow your leader. Walton led and the crowd of moderns followed. Take this 'angle of forty-five degrees' in hand and put it in practice. Nine times out of ten your backward cast of fifty feet will plump your flies, when handled on a ten-foot rod, into the water behind you. And, in the forward cast, with your rod at that angle, ten to one that you will recover it, at least twenty degrees, in order to prevent the line looping and falling with a great splash into the water before your flies touch it."

"No! no! boys," he continued, "the whole matter lies in the nervy wrist movement, with the clear brain and the loving heart behind it. Mendy, neither you nor Gill can tell me how you give that effective quivering motion to your rod. A turn of the wrist, say you; bosh, say I. Your brain wills it and your heart is in it, and the motive power goes right down that good right arm of yours into the wrist, and then up and out that split bamboo, through each thread of your braided line until it culminates in the point fly, not ending even there, I sometimes think, but rather in the tough upper lip of the bass as you strike him."

"Harry is off—not a word, Mendy, or else he'll play this tune for an hour or two," said Gill.

"This 'forty-five degree' theory is all very well, boys," continued Harry, "on a trout stream overhung with brush or forest growth—that is, if the same angle of the rod is used twice the same day on such water (which I doubt), where you are forced to use a ten-foot cast, and to sweep it oft-times parallel to the surface of the stream, or (as I once saw a green one do) to loop your line into a roll like a sailor's casting line, and toss it into a foam of a rapid, hoping that a current will land it in the pool where a 'big trout' should lurk if he knows himself well."

"Don't look so skeptical, Mendy. I m in earnest about this, and I repeat that no man can ever be a fly-fisher unless his heart aids his brain and muscles. Take Tuck for an example. You both know him. His head is clear on all angling points—his fingers deft at bunching a fly. He is full of effective pros and cons. He has got the wrist movement down to a turn, and can show it to you beautifully on a broomstick or cane, but the knack leaves him just as soon as he steps into the stream, and his flies fall *kaslosh* all in a bunch when he attempts a cast; and with all this he can talk us adrift about 'how to do it,' yet you both know that he is the veriest bungler that ever worried a pool. What's the reason? Simply this: The man has gone into angling just as a swell goes into a club. 'It's the thing, you know.' But his heart is not in it, and his nerves and muscles have'nt got enough loving electricity about them."

It was now about 7 P. M., and the sun still shone over the river, except on the right bank, where it was shaded by a dense growth of trees; hence, Harry had the advantage of position. Mendy, in the middle of the stream, had a show at the end of the shadows, while Gill fished in the broad glare, yet aided materially by the scurrying gusts that swept the surface of the pools.

Across the river, starting at the point at which our anglers entered it, a line of rocks extended, which, at half-stage of the stream, were covered with water, except at intervals of about twenty feet, where the current swept between them, making a series of boiling rapids that swirled down stream for some distance. At the tail of these big riffles (the distinction between rapids and riffles, we have often noted, gets awfully mixed up in bass angling nomenclature), at the edge of them, and in the still water and the curl of the eddies behind the protruding rocks, and sometimes in the strength and foam of the riffles themselves—experience told our anglers were likely places for the bass to lie.

"The largest black bass," said Harry on one occasion, "that ever struck my fly, did so at Flat Rock Dam. You know the spot well, Gill, for we had some glorious sport together at the dam, and Tuck once told me that he believed you knew each pebble at the bottom of those pools by its front name; and you, Mendy, flushed and worried over your maiden effort at fly casting some ten years ago, standing on that big rock that reaches a line level with the breastwork of this same dam. Well, my mammoth bass—it must have been a four-pounder—rose to my point fly right in the rush of the surging rapid, the water of which came dashing over the end rocks of the big pool just below the dam on the eastern side of the river, the half of which is jammed by the rocks and the bank into a space not more than ten feet wide, making a rapid which is a rapid for about twenty-five feet.

"I had alternately waded and jumped from rock to rock until I reached the shallows in midstream, then waded down with ankles scarcely covered, to the old boulder that stands, sentinel-like, on the upper and western side of this rapid I speak of; climbing up, I perched myself on the extreme top of the rock, unjointed my limbs and stretched them out with a feeling of comfortable ease and unrestraint, only to be appreciated by a wading fisherman who has been for some hours feet-fumbling on the stony and uneven bed of a river which is made up of deep holes and a ten-horse power current.

"After resting a moment or two I arranged my cast, intending to whip the eddies made by the boiling waters on the lower edges of the rapid. I had never as yet had any luck in the strength of a stream such as this, and—wisely I thought then—chose the sides and tail end of it. I looped on a large point fly to which, in the paucity of my knowledge of the names of flies then, as now, I had given the name of the hornet. You well remember it, Gill, if you can recall our last trip to Perkiomen Dam, when we saw the hornets flying around us, and occasionally falling into the water, where the eager bass soon made use of them. You

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will, perhaps, remember that we also made use of a tolerable imitation, a golden and brown bug we found in your fly-book. Well, I put on the same fly on this occasion and a big gray hackle along with it.

"Tossing my line carelessly into the current, more for the purpose of getting the kinks out of the leader than with a thought of a fish rising to the flies, to my astonishment I saw a black bass plunge across and slightly up the rapid, with a sweep like a flash at my point fly, but missing it. When he attempted to strike, his back for several inches came out of the water, and, as the sun was shining brightly, I could distinctly see his outline and length. Boys! he *was* a whopper. The largest I ever saw rise to a fly in any waters outside of Lake Champlain.

"I was considerably flurried and excited, but cooled down in a moment and made a cast, pointing my ender just below the spot where the bass would probably reach and pause after his sweep at my flies. It was just at the outer edge of the swift current, where concentric and enlarging rings on the surface told me that there was still water below. My 'hornet' no sooner struck the eddy than it was struck by the bass.

"Of course, boys, I had a heavy and a sweating time of it. The old rascal never came out of the wet at all—but that nose of his was pointed all the time, despite my efforts, at the boiling rapid, and at last his body went along with his nose; but I scrambled down the rock as best I could—in fact, slid down flat on my back—and, giving him his own way, down stream he went, with just enough tension on him to hold the barb of the hook tightly imbedded in his jaw until he reached the mid. channel of the river, where the current was comparatively sluggish. Once there he see-sawed from right to left and from left to right for several minutes, until at last struck, or rather inspired—for it was inspiration, intellect, anything but instinct—by that last life-saving idea which I have only seen exercised by two-pounders and upward, my bass went down—"

"And sulked," put in Gill.

"Sulked!" cried Harry. "Not he; there was no sulk in him. Down he went until I felt that he had got to bed-rock. Then commenced a series of tugs—jerks—not angry ones, but regular in time and method, each successive one getting a little stronger than the last. It seemed to me that he had found a hole just big enough for his body between two stones, and that he had braced himself with his pectoral fins against the fore end of these stones, and was bringing every muscle to bear upon the light gear. At first I simply held him taut; then, fearing for my tackle, I let up on him at each tug, but this method, I at last felt, would be a losing game for me, as the jerks grew in strength with an arithmetical progression that alarmed me. Something would give way, I was sure, if I did not bring matters to a focus at once, and I brought them. Putting a sturdy pull upon the fish, as obstinate in its strain as he was in his tugs, I reeled in inch by inch till I actually dragged him from his lair, but, unfortunately, it was a poor day for dragging, for, with a supposed flirt of his tail and a figure eight contortion of his body, he actually tore the hook out of his mouth, and it came back to me with a piece of his flesh clinging to it."

"Boys, what do you think about the way I handled that fish? Was I right or wrong in my treatment of him?"

[TO BE CONTINUED.]

Wm C Harris

ONTARIO.—The Muskoka Lakes district comprises eight hundred lakes of all sizes, from thirty miles in length down to mere ponds. Gravenhurst is the gateway to the Muskoka district. Lake Muskoka proper is twenty-two miles long and nine miles wide. There are hundreds of small rivers, falls, lakes and ponds in this country. Some fishing and shooting may be enjoyed. Black bass, rout, lake trout, salmon and pickerel are caught in different parts; quail, grouse, hares, squirrels, woodcock, snipe, ducks and geese are shot, while deer and bear are to be found not far off. The scenery is grand. The Maganetewan River region—trout, bass, grouse, quail, ducks, deer and bear.

Kahkahlin.

VIRGINIA.—General shore birds are to be found at Chincoteague Island, Wallops Beach, Garguthy Inlet, Assawman Island, Matomkin, Clear Island, Burton's Bay, Trout Channel, Little Matchipongo Inlet, Revel's Island and Matulikin in Accomac county; Hog Island, Sand Shoal, Great Matchipongo Inlet, Cobb's Island and Smith's Island in Northampton county.

Bertrand.

NOR FISH, NOR GAME.

CANADENSIS, PA.

On top of one of the tallest peaks of the wandering ranges of the Pocono Mountains, nestles a bowl-shaped body of water, so sullen because of its great depth and so hideous because of the great number of water snakes and leeches which infest it, that it is far from serving as a break in the utter loneliness and barreness of the surrounding country. There is no spot in Monroe county its equal for wildness. So desolate and uninviting is it that even the hardy berry pickers in the summer are seldom drawn in that direction even by the certain knowledge that about the pond, and for a mile on every side of it, bushes are heavily burdened with black and red raspberries, with gigantic blackberries, and with huckleberries. They dread the thick brush, the tearing thorns, the masses of rotting trees, the rocks and holes which are the home of the deadly rattlesnake; and more than all, they dread the signs which show that men once lived here. These signs are a white head-board that slants away from the edge of the pond as though it had grown weary of marking the place where there was once a mound of earth, but which is now only a hole in the ground half filled with water—a deserted building which stands on the opposite side of the pond, and near the house a big black patch which marks a conflagration that was for years a source of gossip and wonder to all the country people.

Something like twelve years ago a compact little Frenchman with broad shoulders, a full brown beard and all the affability and courtesy of his race, passed through this village and toiled up the steep rock-strewn mountain roads until he disappeared. His passing caused remark, but only such as the presence of any stranger will excite in a place like this where every man knows his neighbor and all his neighbor's friends. The Frenchman did not return and he had been forgotten, when one day a wandering hunter brought the news that a solitary man was building a little cottage near Ick's Pond. Thereafter, for several months, on every Sunday, the villagers, glad of a chance to be entertained, would drive to the pond in their rickety buckboards, and stand about and stare at the bustling little foreigner, who worked on Sunday just as if there was no wooden church down in the village with a little spire in which a rusty bell was rocking and calling the villagers with its rusty tongue.

For a time the country folk were shy of the little man, for they argued that no person whose conscience was clear and whose intellect was sound, would come to such a barren place and build himself a home.

But the pleasure the little man showed when he saw them, and his apparent endeavor to please them and make them welcome soon won their well wishes, and caused them to think kindly of him in spite of his foreign ways and broken English. When they ceased to regard him as something ghoulish and different from themselves, they ceased also to feel much interest in him and after a time he was forgotten. The little man worked along in the barren spot and in a short time he had built for himself, a two-roomed building, the outside of heavy logs and the interior of boards neatly joined together. Then he cut for himself a narrow path through the brush to the edge of the pond and near a spring, and another path to a little knoll on which he built a rude summer house with an umbrella shaped roof. In a few days more he had built two boats and launched them on the sullen bosom of the pond. One of these was extremely wide with amazingly low gunwales, and the other was wonderfully long and narrow. The villages followed his actions, and shortly they knew all they cared to know about him. How they got this information none of them can say. Perhaps they gathered it from a mysterious man who called on him, after loitering about Cresco for a time, and added to what he told them what their imagination prompted. In short it was that the Frenchmen was a very bad man indeed, that among his vices were gambling, fast horses, bad women, a love of drugs and intoxicants, and, worse than all, a great ability to spend money. His friend had come to his rescue when all his money was gone and promised to aid him if he would mend his ways and consent, for a time, to live in solitude. He consented, so the story runs, and the pond with a big track of the desolate county surrounding it was bought for him. A few months after the little man had completed his home, he was joined by a fellow contrymen, as suave and courteous as himself, who climbed up the mountains with him, and was seen no more within the limits of the village. Shortly after this, the country folks had something else to talk about, for a batch of barren land near the Frenchman's home was purchased, and workmen came, followed by creaking vehicles, which for many days toiled up the monntain roads.

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dragging loads of timber. The site of a large building was marked out and the frame erec'ed, and then it was learned that the building was to be the home of a body of nuns. When the weather boards had been nailed on, work on the building stopped for a time, and one night the villagers saw a ruddy flame against the sky, and the next day they learned that the nunnery had been so completely burned that, nothing was left of it, except a heap of charred ashes. Following quick upon this event came the news that the little Frenchman's companion had been drowned in the pond, that his body had been recovered by the Frenchman, who, alone and unaided, had ferried across the pond, on the edge of which he had dug a grave and buried it, setting at the head a board to mark the grave. The place had bee dreary before but it must have been terribly gloomy for the little man, but he was true to his suppposed promise to live there, and he remained for several months. One day 't was discovered that he had disappeared and from that day to this he has not been seen or heard from. The taxes on the place were never paid and a short time ago it was advertised for sale, but before it came under the hammer, the taxes were paid and the place still remains as deserted and mysterious as ever. The little house is fast decaying, the summer house is falling apart, the boats float about on the pond, waterlogged and shorn of oars and seats. There is a legend extant among the villagers here, that the pond abounds with pickerel, and that hordes of sun fish, silver fish and perch live in great numbers within its quiet depths, but the writer tried the better part of one day to prove this, and brought to the surface only a few sunfish and a perch, but never a pickerel jumped. About the edges of the pond and on its bosom with head erect above its surface, swam a lot of huge water snakes with a carelessness born of a certainty that they were safe, while in the shallow water of its muddy banks idly lived t'ousands of hideous leeches. Sometimes in the fall, hunters invade the gloom and dreariness of this region, in the hope that its barrenness might prove a bait for the deer and bear, but there luck here is always poor and traces of game are seldom found, except when some hotly pursued deer leaves its hasty track in the muddy banks as it leaps into the water and swims to the other shore in search of safety. Even the woodcock, that should love the neighboring swamps and break the solemn stillness with its shrill peep, or the partridge with its mighty whirr, are rarely seen. The place is as though death had put its stamp upon it. Nothing moves here, and there is no sign of life except the gliding form of the cowardly rattle snake, crawling from danger or sneaking towards its prey, or its sharp rattle when suddenly disturbed. There is a story that the Frenchman once had caught a rattler and tamed it, as he thought, but, that it had bitten him and that in the wound thus caused, he had plunged a knife and then sucked at the bitten place so strongly that no ill effect followed. There are other stories as weird and improbable regarding this spot and the mysterious man who lived here, but most of them are tales conjured up in the minds of the villagers, as they sit about their roaring wood fires, on bleak winter nights, and think with a shivering dread of Ick's Pond and its dreary frame of brush and towering mountain peaks.

Geo. W. Blake

For several years past the leaves of our elm trees heve been ruined by the elm-beetle. Last year I noticed the cedar bird devouring the beetle and larvæ. This year our elms are comparatively free from the pests. The leaves are scarcely injured at all, and the cedar birds are obliged to look close to find a beetle. They hunt over the trees in small flocks. They also destroy many other injurious creatures. This bird likes berries. Raise enough for them as well as for yourselves, and they will pay you back with interest. The cat-bird and red-eyed vireo both eat the unsavory pear-slug. But it is not necessary to mention the good services rendered by our most common birds, such as the robin, brown thrush, cat-bird, bluebird and wren, as all observing horticulturists are aware of the good they do. Our winter birds are also doing good work. The seed-eating ones pick up great quantities of the seeds of noxious weeds, while our woodpeckers, jays and chickadees are constantly on the lookout for hibernating insects. Spare and encourage the birds, both winter and summer, about your home grounds and fields.—*Mary Treat.*

NATURE contains sixteen pages of well-edited and interesting matter. The field for such a paper among gentlemen sportsmen is large and worthy a supreme effort to fill it.—*Seaboard.*

Vespers.

The robins call me sweet and shrill:
"Come out and fare afield;
The sun has neared the western hill,
The shadows slip down sure and still,
But in our meadow wide and wet
There's half an hour of sunshine yet;
Come down, come down!" Who would not yield?

Across the road and through the lane,
Where buttercups grow tall and bright
With daisies washed in last night's rain—
Beyond the open bars I gain
An angle of the rude rail fence,
A perfect coign of vantage, whence
Wheat-field and pasture stretch in sight.

The cows, with stumbling tread and slow,
One after one come straggling by,
And many a yellow head falls low,
And many a daisy's scattered snow,
Where the unheeding footsteps pass,
Is crushed and blackened in the grass,
With brier and rue that trampled lie.

Sweet sounds with sweeter blend apd strive:
In its white prime of blossoming
Each wayside berry-bush, alive
With myriad bees, hums like a hive;
The frogs are loud in ditch and pool,
And songs unlearned of court or school
June's troubadours all round me sing.

Somewhere beneath the meadow's veil
The peewee's brooding notes begin:
The sparrows chirp from rail to rail;
Above the bickering swallows sail,
Or skim the green half-tasseled wheat
With plaintive cry; and at my feet
A cricket tunes his mandolin

High-perched, a master-minstrel proud,
The red winged blackbird pipes and calls,
One moment jubilant and loud,
The next, to sudden silence vowed,
Seeks cover in the marsh below.
Soft winds along the rushes blow
And like a whisper twilight falls.

Ellen Burroughs in Scribner's.

TALKS WITH THE TYRO.

Sportsmen require boats when they fish in the sea, in lakes, ponds and rivers, and sometimes when they shoot wild fowl and marsh birds. Any kind of a solid row boat or small solid sail boat will do to fish on the sea, and most any row boat or small sail boat can be used in fishing on rivers and lakes. Where a boat is used in angling on ponds, lakelets and streams, where there is no danger of squalls and rough water, a canoe is best. For wild fowl shooting, in carrying the sportsman to and from the marshes, and in rail shooting, where the boat is pushed through the rushes, a small two-pointed both-ends-alike-long-diamond-shape-sneak-box-called boat is used. Some call them duck boats, and there are other names they are known by. They will hold two persons but are better with one person in them. They are made in sizes running from fifteen feet to twenty-five feet in length, and from two feet to three and a half feet wide in the middle. They resemhle an oarsman's practicing shell decked over with room in the middle for the occupant. If you go far with these "sneak-boxes" you should use oars, or a little handkerchief-like sail; but you can use a paddle. All boat builders build them to order; many keep them ready made. They cost from $15 to—well, as high as you are inclined to pay. Thifty dollars will buy a beauty. In the summer it should be painted a pale green when the rushes are that color, and in the fall grayish-brown, like the decayed rushes are at that period. I have one of these boats. I call it "The Cradle," for many and many a night it has gently rocked me to sleep as I lie waiting with decoys arranged ready for the early morning flight.

Some fishing boats have what is called a tank, in the stern under the seat. In this, water is allowed to run in and out, and the fish, after being caught, are kept herein alive. These tanks are simply the extreme end of the boat's stern partitioned off with holes bored through the wood to let the water in and out. They are of no use where the water is deep, for you have only to string your fish, tie them to the boat's side and let them lie in the water. When you are ready to propel the boat take them in. Never let your fish lie in the sun to suffer, die and rot. If the water is not deep, and by putting your fish over the side of the boat will interfere with your further catch, avoid the proceeding of course; and if your boat has no fish tank you should provide it with a small tub or large pail for your fish.

* * *

Here is a good way to go shooting from the city for one day when you

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know of no objective point. We will suppose that you wish to board a train for the New Jersey coasts or Long Island grounds, and don't care to leave anything at a tavern while you enjoy the day. You simply wish to get off the train at some little station and go into the field, marsh or woods at once, walk where you like, prepare your own lunch, and when the day is over board the train again at the nearest station and return home. Very well, then. You first put on respectable looking clothing, but they must be articles you do not care to wear only for outing purposes. Wear no overcoat, but be sure your suit is strong and warm and that you have on plenty of underwear. Wrap up well your gun in strong paper, leaving the gun case at home. You must take with you only that which you will actually use and which need not be left anywhere, for you do not intend to return to any particular place. You may get on the train to come home fully ten miles from where you left it. Fill your cartridge bag (not belt) with a combination of cartridges, bread, cheese, cold meat, pepper and salt, and whatever other little eatables you like. Wrap the bag in paper and with a skate-strap strap it to the gun. Then, with plenty of matches and the old pipe and bag of tobacco in your pocket, you are ready for the train. Your dog may go with you, of course. When you leave the train make ready your gun, fold up the wrapping paper carefully and tuck it away in your hip-pocket. Sort out the lunch from the cartridges and then you're ready for the rural tramp. What do you care about any hotel on such a trip as this? Who can cook a better lunch than you can have in the woods at any time o' the day you like? And who is there that can have a better appetite to eat it than you?

* * *

Where we use the word fish, one species is referred to; to say fishes we mean more than one species; as when we mention black bass, trout and pickerel, then we say these fishes. If we speak of any one of these species, we say fish. A dozen pertch are fish; eleven pertch and one trout are fishes.

* * *

The words "broke" and "broken" are used in speaking of the training of a sporting dog. There is a great controversy among sportsmen as to which is the more correct. Audubon used the word "broke" and so did Hawker, Forester ond other great sporting writers. A great many, however, prefer "broken." Both are correct. We might properly say: This dog was well broken in his early davs; here is a dog that is well broke; we will break this setter; this pointer gave us much trouble in breaking him.

* * *

An *angler*, accordfng to Webster, who, by the way, was evidently not one himself, is a man who fishes. Sportsmen use the term "angler" to define the noble lover of the gentle art from the coarse salt water *fisherman*. No man is modernly termed an angler who fishes without a rod and reel or who fishes in any manner in salt water. The angler and the gentle art both belong to fresh water. Who ever heard of gentle angling in the sea, where coarse tackle, boats and fishes, and rough, noisy water predominate? It is along the quiet silvry stream's mellow bank, shaded by the trees, charmed by the birds and floral perfume that the angler meanders, gently casting here and there, now over this bit of shubbery, now through these low tree branches, now out over the tiny ripples into some silent pool, or casting his delicate line from a frail canoe into the calm water of some secluded lakelet. O, no; he of the gentle art of angling ne'r finds his delight upon the sea, though here the *fisherman* may be at home. It would be hard indeed to use the words "silent," "delicate," "quiet," and "gentle" in speaking of sea fishing, qnite as difficult in fact as it would be to *be* either delicate, quiet or gentle in the latter sport.

* * *

Generally speaking we say, when we refer to sport with the shotgun, *shooting;* where the rifle is referred to, *hunting*. For instance: we go woodcock shooting, and antelope or deer hunting. Those who use the shot-gun are termed *sportsmen*; those who use the rifle are *hunters*. To shoot well with the shotgun is to be a good *wing shot;* to do good work with the rifle is to be a good *marksmau*. A *rifleman* is a milertary marksman; a *trap shooter* or *trap shot* is one who participates in shot gun trap-shooting matches. A *crack shot* applies to either pistol, rifle or shot gun expert. A *sportsman* is a true lover of rod and gun sports, and a man who respects the game laws and everything else that is honorable. A *sport* or *sporting man* refers to a gambler, a race horse admirerer, a Bowery tough, a lowlive dog figher, an inhuman prize figher and a well dressed burglar.

Chas Barker Bradford

JOE AND I.

It is not pleasant to have one's self pulled out of a warm bed in the dead of night as to all appearances, but he must be a sleepy-head indeed and no sportsman who is not awakened with energies aroused by the following words: "The team's ready and the dogs are wild; hurry up." A quickly eaten breakfast and T., A. and the writer are being driven away from the yet slumbering hamlet toward the swamp that lies back of Moss Hollow, a now deserted tannery.

The good people of Ariel say, "Its 'bout four miles down to the swamp," but I'll bet my gun it is over six. The road leads up the mountain side away from the lake, and we are early enough to catch the first rays of the sun as they appear above the hills over the water. My companions and I comment on the scene that lies below and around us. The pastures to the right and below to the left are almost white on account of the recent fall of snow and the frost. The keen atmosphere makes one feel that a heavy laprobe is none too much and that walking would be much more desirable than a cramped seat in the "platform." The road now strikes into the woods, and for the rest of the way our route is through second-growth timber.

Now and then the whirr of a pheasant (ruffed grouse) from the roadside attracts our attention. The birds thus flushed were all feeding on the tender leaves of the blackberry briers. T. shot one from the wagon as it rose from the roadside, and I opened its craw and found it stuffed with fresh brier leaves. We flushed five during the drive and they all got up from small patches of briers. Nothing of any further incident happened on the drive.

We arrived at the tannery about 7 o'clock, the team having to go slowly on account of the muddy roads. The horses were soon blanketed and put under a shed. The dogs were put down and allowed to follow the wagon the last half of the way, to let the wire edge wear off, but there was a good deal of spirit shown by those three dogs when we jumped out of the wagon with our guns. The brook that supplied the tannery with water ran through a now disused pasture, but here and there on its banks were clumps of bushes (briers mostly) thick enough to supply ample cover for a covey or more of birds. I took the left bank, T. the right, while A. skirted the edge between us and the woods. The dogs manœuvred finely, that is, T.'s and mine did. A. didn't let his work, but kept him at his heel.

We had not gone far before T.'s dog came to a handsome point. Calling to us to look out, T. walked up and flushed two birds. Throwing his gun on to them he pulled one trigger and then the other, but the gun did not go off; the safety had not been pulled back. This was his first hunt with a hammerless and he was not familiar with its mechanism. He quickly saw what was the matter and shouted to A. to look out for them as they flew in his direction.

"Bang, bang," came from A.'s direction.

"Get them?" I asked.

"Missed them both, confound it; beautiful shots," came the answer.

We hunted down this cover, killing three birds, all falling to the lot of T., and flushing four more.

Coming out on the road we walked a few rods down it and started in at the head of a large swale. Here we spread out and each man hunted for himself. We called to each other now and then, so that with care there was no danger of shot coming whistling around one's head.

I had not gone far before old Joe's tail began to wag, a sure sign that birds were not far off. I cautioned him a couple of times and he began to work around slowly. I didn't have to wait long before up came his hind foot and his tail stopped wagging. I here cock my gun and steady him in a low tone. Down comes his foot and he moves a few feet ahead. He makes a fine picture, quivering slightly and now and then slowly turning his head to see if I were coming.

I walk up to him, and whirr, whirr, went two pheasants. I toss the gun to my shoulder and shoot twice. The first bird goes down, but the other one, the smoke being so thick, I don't know whether it is hit or not.

"High on, Joe; dead bird," and the old dog jumps forward. He works around and I lose sight of him. A moment later he appears with a fine old cock pheasant in his mouth and holds it up for me to take. I take it and slip it in the back of my coat and send the old dog off to look for the other bird, following slowly.

Soon I lose sight of him altogether. I whistle, but without result. I call with no better effect. At last, sitting down on a log I cut a switch to punish him with. Soon I hear a movement in the bushes and out comes Joe wagging his tail with a wounded bird in his mouth. The first pinion joint only being broken, he must have had a long chase

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to capture a bird so slightly wounded. He makes five more points and I get two more birds. I am growing a little tired and think that a rest of a few moments would go very nicely.

Calling to A. and T., we are soon together and discussing guns, dogs and the day's sport.

A. has three birds and T. five. T. looks at his watch and it is twenty minutes to twelve. He has to take the 3.30 train for home and thinks that we should return to the wagon, which we do, but hunt back over different ground, letting the dogs work together. Just before we strike the road leading to the tannery, Joe comes to a point with Flash backing him a little to the left. Frank draws on another point. It is a pretty picture, the dogs as they stand, Joe with Flash backing him and Frank about sixty feet to the left on a staunch point. We spread out and flush them. Whirr, whirr, whir-r-r-r, and seven pheasants take wing.

Three shots ring out almost as one, followed by three more in quick succession. The smoke clears away. Frank and Flash lie crouching in the grass, but Joe has broken shot and is coming toward me with a bird in his mouth. I reprimand Joe and tell him "to heel." The other dogs are told "dead bird," and they bring in four more birds, which makes one apiece and two over. As to which two of us killed the extra birds is a point that is not settled yet, but we toss up for them and one falls to my bag and the other to A.'s.

A short walk and we reach the wagon and enjoy a hearty lunch before our journey home, and arrive there in time to put T. on board his train. We all vote the hunt a success, and the time we had one of the jolliest of the jolly ones.

A. came up the next week, and we took another day together, of which I will give an account in my next letter. *Harrie Sellew.*

THE PREHISTORIC HORSE.

The modern horse is descended from a horse-like animal whose remains have in recent years been brought to light by several of our advanced scientists. These remains are found in the lake and swamp formations spread over considerable portions of New Mexico, Wyoming and Utah.

The earliest horse, says the *Inter-Ocean*, or horse-like animal, had five toes or fingers, and the rudiment of a fifth toe or finger. This period is called the Eocene, and the animal the Eohippus and Orohippus. It was not larger than a fox or an ordinary terrier dog. Geologists believe they have traced it through another stage to an animal whose characteristics more and more resemble those of the horse, and whose size was that of sheep. This is the form to which the names of Anchiterium and Miohippus have been given. These names mean a creature approaching the horse; they apparently had three toes, and they belonged to the Miocence period. In the Pliocene times came the Hipparion and Pliohippus, animals as large as the modern donkey, and almost a horse; these still had three toes or fingers, but the central toes alone rested on the ground, the others being drawn upward, and useless for working purposes. In the true horse, as we now know the animal these external toes or fingers have become rudimentary; there is no external trace of them, but when the skin is removed from the horse's shank two skewer-like bones are seen, one on each side of the cannon bone. It was only in the Pleistocene period (immediately preceding man) that the animal appeared which approached in size the existing horse. Many important structural modifications have taken place since the beginning of this era, such as the lengthening of the neck, the altering of the skull, the changing of the coarse and heavy mane, and differences as to limbs, as well as the teeth in a marked degree. The breeding of horses by man has brought about many artificial changes, which, added to the changes already referred to, have given us the useful and beautiful modern animal. When deprived of the influence of man, the horse soon displays a tendency to retrograde to the earlier types, the limbs and body gradually diminishing, while the head remains the original size. The speed attained by the modern horse is the result of their care in breeding, something not required in the earlier types of the animal. Professor W. H. Flowers remarks in regard to the single toe: "It can be demonstrated by the structure of the foot itself, and also by an examination of the intermediate forms, that this toe corresponds to the middle or third of the complete typical or pentasactyle foot; and there is very strong evidence to show that, by a gradual concentration of all the power of the limb upon this toe, and the concurrent dwindling away and final disappearance of all the others, the present condition of the horse's foot has been produced."

NOTES FROM THE MAASH.

GROSSE POINTE, Novambaire 18 time.

TO DE EDITAIRE MAN:—Foar tree faive day de maash has bain hide heself too tree feet thick, de fog was so plenty sirculate 'bout de Pointe. De dauck doan't like dem fog so much as dey done de Foar' July weddaire, because de spoartman get onto dem befoare dey got taime to quack.

Whaen I hear dat Presidaant Hairrisaun was out makin' de dauck shoot in Marylaand las' week, I saent heem ha eenvitashun to caum on de Pointe waance an' try heez opportunitee. I toale de Presidaant dat de dauck fly so mauch partisan round de Pointe dat dey cood be killed een "blocks of five" wid de saime shotgaun.

John Wannamakaire rited me dat he wood like to make veesit on de Pointe, but, being a Christian pedlar, he preferred buying de canvass from de back of de dauck widout killing de leetle bird een seex or faive place.

Whaile I taink on it, I want to tole you dat Joe Bedor has got heem new hotaile on de Pointe. Heez call eet de "Jean Baptiste," after soame of heez Qu.bec relashun. I toale heem dat he ought to call eet de Angelique foare heez wife, as she was aftaire heem moare dan all heez relashun put togeddaire. De Baptise eez full of boardaire all de tame, an' Joe try heez best to keep de boardaire *full* too. Joe keeps all kind o' gaime, from squarrail pie an' chipmonk on toast down to draw pokaire. Eef de boardaire man get tired of a brace of dauck he can be amused wid de brace faro. Joe rent fairst-class boat an' shotgaun to gentleman, an' eef de gaun doan't keell too time out o' twelvet deen heez weel geeve you soame Canada wheiskey dat will kill by de clock. Joe has leeved all heez life on de *maash*, wid de excepshaun of de time dat he was constable, an' den heez leeved on de taxpayer. Whaen I was at Bedor's las' week daire was wan man from New Jersay kill thairty-twelve dauck een wan day. After goin' to bed he killed thairteen or nainty bed bug een one night, an' on Toledo time, too. Joe eez getting de hotaile measured foare new bill of fare, an' by next week de boardaire man will know what dey eat widout consaulting de Grosse Pointe doctaire.

Joast so soon dat axsitement bust out on de maash deece wintaire, your papaire weel bean full of mi informash. *Jean Jac.*

THE SUNAPEE TROUT AGAIN.

In the columns of the *American Angler*, *Forest and Stream*, *Shooting and Fishing*, etc., several gentlemen have argued and reargued the question of the origin of the famous Sunapee trout.

Dr. John D. Quackenbos, regarding whose unquestioned ability nothing need be said, proclaims it to be a hybrid, asserting and declaring that it is nothing else. Having grasped that theory, he proceeds to prove it beyond the peradventure of a doubt—to his own mind—nothwithstanding the fact that a very grave doubt as to the infallibility of his position still lingers in the minds of others.

Col. Elliott B. Hodge, the present head of the Fish Commission in New Hampshire, insists that it is the only genuine *native* trout in the lake. He declares that it belongs to an altogether new species, that its like or likeness has never been known to exist in other waters, and—not without reason—says it is a discovery of his own.

Prof. Bean, of Washington, whose eminence in questions of ichthyology is so well known that I pass t over without further mention, does not quite know what he does think. He says first that it is a brook trout; then he says it isn't. Next he calls it the blue-back of the Rangeleys; then he denies that also. Finally he journeys to Labrador and holds that it is the great-great-grand progeny of the trout of that cold country. And at last, with a modesty which is worthy of being immortalized, he admits that he does not know what it is.

Ex-Commissioner Weber (and ex-Commissioner Legion, in fact) have written and talked about it until a poor fisherman like the writer, upon hooking one, cannot be blamed for wondering what in the name of fishes he has caught.

Here are the various names (or a few of them, at least) which have been given to this really superb fish: *Salvelinus sunapee*, by Dr. Quackenbos; *Salvelinus oquassa*, *Salvelinus aureolus* and *Salvelinus fontinalis*, by Bean, and several more not worth mentioning by the native fishermen of the lake.

There is one man who is in every way competent to give us some evidence, one way or the other and to the point, on this question, but he has, unfortunately, declined to do so. I refer to ex-Commissioner A. H. Powers, of Grantham, N. H. He has fished in the lake since he was a

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mere lad, and that was quite a while ago; he says that he never caught one until the year when, in company with Col. Hodge, they discovered this nameless being spawning upon the ledges near Loon Islands.

It is not my wish to reopen this discussion, for the reason that, with a modesty equal to that of Prof. Bean, I am forced to admit my incapability; but when, only recently, I eagerly seized upon a magnificent volume by United States Fish Commissioner Goode and saw that he, too, had "dodged the issue," and had awarded this noblest of all noble fishes but the smallest possible paragraph, and that, also, without even deigning to guess at the thing, I concluded that it was time to once more set the ball rolling. It is my purpose here to endeavor to prove by the rules of evidence two things, *i. e.*, what this golden beauty *is* and what it *is not*.

Impartially considered the testimony is as follows:

"It has a blue back like the trout of the Rangeley Lakes."
"The coloring of its back is precisely similar to that of the common brook trout."
"It has par marks—when young."
"It has not."
"It has white stripes upon the fins like the brook trout."
"The white markings upon its fins differ materially from those that are characteristic of the brook trout."
"Its mouth and teeth generally resemble the brook trout."
"Its mouth and teeth are like the land-locked salmon."
"Its habitat is that of the land-locked salmon."
"Its habitat is that of the common lake trout."
"There are many in the lake which will weigh ten pounds."
"Its weight never exceeds six, or, at the most, eight pounds."
"It was never known to exist anywhere, prior to its discovery by Commissioner Hodge and Mr. Powers, five or six years ago."
"Native fishermen captured it in Sunapee twenty and thirty years ago."
[N. B.—The writer has failed to materialize any such native fishermen.]
"It spawns in the lake upon rocky ledges."
"It has been known to attempt to run up the brooks."
"Its manner of locomotion is precisely that of a salmon, not at all resembling a trout."
"It swims exactly like a trout."
[Anyhow, it swims; to this point the writer can positively testify.]
"It is a cross between the brook trout and the land-locked salmon."
"Such a cross is impossible," etc.
"It is a cross between the salmon and the lake trout."
"There are no lake trout in Sunapee."
"It is a cross between something-or-other and something-else."
"It can't be a cross, as in that case it would not preserve its identity and individuality from year to year."
"It is a native of the lake and has always been there."
"It was never seen there until within the past five or six years."
"It is a 'foreign element' put in by somebody just for fun and to puzzle the commissioners."
"That is nonsense."

All alike agree that it is a fish.

In fact, there is no doubt whatever upon this point. It is a fish which evidently takes infinite delight in so being.

Now let us review the testimony, of which I have really given only scraps, but which, in substance, is entirely correct; let us sum up:

First, we are compelled to take the *best evidence*, which means, in plain English, that which bears most directly upon the question.

The writer, throughout the present autumn, has often been the guest of Col. Hodge at the state hatchery on Sunapee Lake; earlier in the season he partook of the bounteous hospitality of Dr. Quackenbos at his "Soo-nipi-side Park," and, as the present status of the argument is solely between those gentlemen, it is fit that this statement should be made. The reader can thereby understand that no partiality is intended in the following result of his inquiries:

First (again), the hybrid theory of Dr. Quackenbos, while sophistical to the last degree; while full of pith and point; while teeming with high-sounding phrase, scientific nomenclature, heaps of "book larnin'" and Darwinian evolutionism, is—and I do not hesitate to use the word—illogical. Why? Simply because there is nothing which may be termed "best evidence" to support it. He adduces nothing but secondary evidence, and much of it might be said to be "three or four times removed." Space will not permit a detailed review of his argument, which concludes by daring the gallant colonel to cross the salmon and the trout and thus "see what he gets." The eminent doctor is a learned man. Given pen, ink and paper, he would, without doubt, quickly satisfy the average reader that the Sunapee trout is a cross between a jack-rabbit and a kangaroo. The only testimony that he furnishes which is worthy of a place on the records is, that the fish in question has many peculiarities common to both the salmon and the trout. Very well; so has the bass, the pickerel, the sucker.

Col. Hodge, who has made fish a life study, is in the same predicament. His evidence is all secondary. After much deliberation, consideration, examination and investigation, he has come to the conclusion that the Sunapee trout is a brand new trout, "all wool and a yard wide," and that it has inhabited the waters of Sunapee Lake ever since the glacial period; but the position which he takes is as unstable as that of Dr. Quackenbos, for the reason that he can furnish no evidence—that may be called evidence—to support it.

The writer has talked with scores of men who have fished those waters for upward of twenty years, and some of them as many as forty. None of them ever saw the Sunapee trout until the commissioners called attention to it recently.

Reduced to a few words and gleaned from all sources, the best evidence ts as follows:

It is a fish—it swims—it spawns—it is beautiful (more beautiful and gamy on the hook than any other fish known to man)—it is *not* a hybrid—it may be a trout—it may be a land-locked salmon—it certainly is *not* both—it has an individuality purely its own—it is now in Sunapee Lake.

What is it?

Will some of the learned gentlemen who have tackled this subject before tell me in plain terms what it is, where it came from, when it came and how it got there?

Will the eminent gentlemen at the nation's capital bestir themselves to throw light upon this dark but golden subject, instead of backing and filling to close by saying weakly exactly what I have said, "What is it?"

I have proven here that it *is* a fish.

I have likewise shown by the very lack of "best evidence" that it *is not* a hybrid.

More than that, with my extremely limited fund of fish lore, it is impossible for me to do.

Any person can make a statement unsupported by efficient testimony. If I were called upon to make one I should say that this goldfish of Sunapee Lake is beyond doubt the peer of all fresh-water fishes for beauty, grace, game and table. I have "been there" and I know.

Nevertheless, with all due respect to Col. Hodge, Dr. Quackenbos, Prof. Bean and innumerable others, I must perforce return to the burden of my song and ask:

What is it?

Frederic M. Dey.

A DAY'S SHOOT ON ONE OF THE COMORO ISLANDS.

A short time ago, being on the island of Mayatta, one of the Comoro group, and hearing fair accounts of the shooting, three persons started out early one fine morning. The shooting grounds being some distance off, we endeavored to get something to ride. After some difficulty we succeeded in inducing one of the French Government officials to let us have some of the small mules they were using to carry on some goverment work with.

The ride was a very pleasant one. We jogged along in Indian file over a narrow road, which lay for the greater part of the way through dense woods where it was cool and shady, but every now and then, coming out into open spaces, where we got occasional glimpses of the sea, through the luxuriant tropical vegetation. Bright-colored parrots flitted hither and thither with noisy chatter, and occasionally a monkey appeared on the scene to scrutinize the passers by. It was fortunate for us that so much of the way lay through the shady woods, as the day was a scorcher with no breeze to give one any respite.

It was a good twelve miles to the place we were recommended to go to, a high wooded ridge, at the foot of which there was a small house, partly farm house, partly restaurant. On the way out, we saw no signs of anything except the before mentioned parrots and monkeys, until we got very near the house, when we saw four or five pigeons. Our guide insisted that there were always plenty of pigeons in the woods on the ridge.

After resting a few minutes at the house, we separated and took different paths leading up the ridge. I tramped on, over a wild, rough tangled path, up and down hill, over big boulders, and nearly melted by the intense heat for over an hour, hearing occasional shots from the others but seeing nothing myself.

I decided that I would have much more fun by returning to the house and sitting down comfortably in an easy chair, with something cooling to drink.

I hadn't lost any pigeons, anyhow.

I got nearly back to the house when I met B., who said, "Hello! I have been looking for you. I've got several pigeons, but I saw five or six large animals jumping from tree to tree. I didn't know what they were, so I was afraid to shoot, as they might be on the catamount order, and I

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couldn't get away with them all. I came to get one of you fellows to go back after them."

Now that there were prospects of finding something to shoot at, especially as we had no idea what it was, I recovered promptly from my previous weariness, and we started back immediately. It was a half hour's tramp up hill again to where the unknown animals were seen. We got to the place, but nothing could be seen for some time, when "There, what's that?" and through the leaves of the trees we could see, about fifty yards off, an animal several feet long, with a long bushy tail, leaping from branch to branch in a noiseless, ghost-like manner. Up went my gun and down came the animal, whatever it was. Then there was a rustling of leaves and branches immediately overhead.

Looking up we saw two more of the strange animals. Then off in different directions we saw still more. We fired rapidly and succeeded in getting eight of them.

They were from fourteen to eighteen inches long, not including the tail, which was that much longer. They had long sharp muzzles, large eyes, small pointed ears and hand-like feet. The fur was soft and nice, and a light brown in color. The tail was long and bushy, and the same color as the rest of the body, and the fore legs were much shorter and smaller than the hind ones.

They did not appear to be at all ferocious, and B. need have had no fear of their attacking him if he had known what they really were. Perhaps, however, it is better to do as he said, and take no unnecessary chances with animals that you don't know anything about.

Upon getting back to the house with the animals the natives pointed to them with loud cries of "Ha! ha! Maki, Maki," evidently not thinking very highly of our success.

We made numerous inquiries as to whether the things were good to eat, and were told in every case that they were; still there was something in the manner of our informants that made us put but little faith in their answers.

When we got back to the ship, however, we insisted that the Maki, or Lemurs, as we found them to be, were highly prized as an article of food by the *élite* of Madagascar, and that we were remarkably fortunate to get any at all.

The fellows, however, would have none of it, but reviled us. Said they were monkeys. "Why, look at their feet. I had just as leave kill a baby as one of those innocent, inoffensive things."

In spite of all scurrilous remarks we had them cooked. Our Japanese steward thought they were strong, so he soaked them in vinegar for a long time; then made them into a stew. The vinegar, which had not been washed off, was so strong that nothing else could be tasted. This, in connection with the fact that no one else would touch them, but all continued to revile us, made it hard, for me at least, to get away with anything at all.

"See that little hand? A baby's hand, isn't it? How do you like stewed baby? I should think they would feel like murderers, or rather like cannibals,' and kindred remarks are not appetizing. Still we had to do our duty, and ask for more, even if it was hard.

The Lemurs as now restricted are all natives of Madagascar and the neighboring islands. They received their name, which is particularly appropriate, on account of their noiseless, ghost-like movements. They are allied to the monkeys, and, like them, are quadrumanous, but in other respects are more like the ordinary quadrupedal type. They are gregarious and feed on birds, insects and fruit.

We afterward had two of the ring-tailed variety on board ship as pets, and nice little creatures they were. Shy and wild at first, but afterward very tame and affectionate.

Soon after they came on board they were both very sick indeed, the change of life evidently being too much for them. One of them died, and the other was very sick for a number of weeks, during which time he was nursed and tended by the captain of the Swetop, as carefully and constantly as though he had been an only child. Finally the little fellow pulled through and was able to get about, although it was many days before he recovered entirely.

The "Mak," as he was usually called, fully appreciated the care and attention that had been bestowed on him and was very grateful and affectionate toward his nurse. His usual place of refuge was on his master's shoulder with his tail curled about the man's neck.

After the Mak had fully recoverer from his long sickness, he was very tame and playful. It was amusing to see him playing, making long noiseless leaps about the deck and rigging, now and then alighting on some one's shoulder, then off like a flash. The most comical sight of all was to see him box with some of the men, who were always ready to play with him. He would sit up on his hind legs and make furtile efforts to strike out and parry with his short front feet or hands. At the same time there would be a most peculiar expression on his face—a comical grin.

He would only attempt to box a very short time, less than a minute, then away he would go to his master to rest; but he would return in a short time, to have some more fun.

He enjoyed a little hammock and blanket which were made for him very much indeed. He would lie back in the hammock—cover himself partly up—get hold of a string, made conveniently fast, and swing himself while watching and taking great interest in whatever was going on around him.

Charles P. Eaton.

AMERICAN ORNITHOLOGIST'S UNION.

The annual meeting of this body was held last week at the Museum of Natural History. The session occupied five days, beginning on Tuesday. Many of the most distinguished ornithologists in the country were present, including Dr. Elliott Coues and Robert Ridgway, both of the Smithsonian Institution, Washington, Vice-Presidents; Dr. C. Hart Merriam, Chief of the Division of Ornithology and Mammalogy in the Department of Agriculture, Secretary; Wm. Dutcher, of this city, Treasurer; Wm. Brewster, of Cambridge, Mass., Charles B. Cory, of Boston, Mass., Daniel G. Elliott, of New York, Members of the Council; Charles F. Batchelder, of Cambridge, Mass., Frank M. Chapman, of New York, Jonathan Dwight, Jr., of New York, Col. N. S. Goss, of Topeka, Kan., State ornithologists; Dr. Edgar A. Mearus, United States Army, of Fort Snelling, Minnesota; John H. Sage, of Portland, Conn.; George B. Sennett, of the American Museum of Natural History; Dr. Robert Shufeldt, United States Army, of Fort Wingate, New Mexico, and Gurdon Trumbull, of Hartford, Conn. Among the associate members present were Leverett M. Loomis, of Chester, S. C.; S. Lowell Elliott, of Brooklyn, and L. H. West, of Roslyn.

Prof. J. A. Allen, presided at the election, which took place on Tuesday. He was re-elected president, together with the following ticket Vice-presidents, Elliott Coues and Robert Ridgway, of Washington; secretary, John H. Sage, of Portland, Connecticut; treasurer, William Dutcher, of New York; members of the conncil, William Brewster, Charles B. Cory, Daniel G. Elliott, Henry W. Henshaw, George N. Lawrence, C. Hart Merriam and Leonhard Stejneger. A number of interesting papers were read in the course of the four days session, some of which we hope to reproduce in the columns of NATURE. In one of these, the president, Prof. Allen, noticed the difficulties which interposed in the work of classification.

At one period, as in 1870, he said there was a tendency to excessive sub-division. Then the pendulum swung the other way, and about 1880 few sub-divisions were made. Now the tendency is again toward excess. Fifty years ago, the Professor added, there was no large collection of birds in America. The work of making collections had been greatly stimulated by the Government surveys, the parties being accompanied by field naturalists and ornithologists. Their collections were sent to the Smithsonian Institution. As the collections grew, the questions of classification became more and more difficult.

After the exhibition of various specimens of birds the congress adjourned till next year.

MICHIGAN.—The people of Bay City, who are fond of angling—throw the fly for black bass right from the main bridge connecting the town proper with the western side across the river, and they catch a good number of fish. A great many ladies enjoy the sport. Bay City is in Bay County, on the Saginaw River near the Saginaw Bay, which is a great fishing, duck and snipe locality. Ducks of all species are shot here by the thousands. Half-breed Frenchmen kill them with cannons, loaded with a pound or two pounds of shot, and sell to the markets. Any one living at Bay City—a most beautiful place, populated by charming people—can have easy access to a great variety of shooting and fishing spots. Great numbers of duck, geese, snipe, quail, grouse, woodcock, squirrel, hare; trout, black bass, grayling, maskalonge, pickerel, pike and perch, can be secured within an hour or so ride of the town proper.

H. J.

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EARTHQUAKES.

It is manifest that the initial impulse of an earthquake must be due to some sudden and violent origin. Various causes may he conceived as possibly producing the shock. For example, when the roof a subterranean cavity collapses, a concussion must be produced which may have the effect of an earthquake at the surface. In limestone countries, such as Carniola, the ground is honeycombed with grottoes and passages, and slight shocks of earthquakes are of frequent occurrence, due, no doubt, to the falling in of some of these underground caverns. More violent effects might arise from the collapse of large emptied volcanic reservoirs, as perhaps has occurred at the extinct volcano of Ischia. Again, the rocks of the crust are in a state of continuous strain, due to various causes, and especially to the gradual contraction that arises from the slow cooling of the planet. From time to time there probably come moments when they can no longer bear these stresses, and when consequently they snap asunder and readjust themselves in a new position of equilibrium. A slight dislocation of this kind would undoubtedly set in motion a series of earthquake waves that might devastate the country far and wide, while a more extensive fracture might produce such a catastrophe as man has never yet witnessed. Such sudden ruptures of rocks are not impossibly the sources of the earthquake shocks so frequently experienced in mountainous countries. Along the range of the Alps, for instance, subterranean disturbances are of common occurrence, varying in force from hardly perceptible tremors up to smart and more or less destructive shocks. That mountain chain has a long and most interesting history, which takes us back to the early beginnings of the shaping of what is now the European Continent. Instead of having been produced by one primeval uplift, the Alps have been upheaved again and again, and during the intervals of repose their crests and declivities have been slowly worn down, as they still are to-day by frost and rain springs and brooks, rivers and glaciers. Yet the repose has only been comparative. That intense crumpling and contortion, the proofs of which the tourist gazes at with wonder along the mountain sides that plunge down into the Lake of the Four Cantons, has left the rocks below in a state of strain from which relief is at intervals obtained by a sudden snap or crack. Whether or not any local change of level may be appreciable, either in the way of elevation or subsidence, these subterranean tremors—"growing pains" we might call them—must be regarded as evidence that the building of the Alps is not yet a complete process. Again, along the oceanic borders of the continent, earthquakes are of frequent occurrence. Continents are areas that have been upraised; oceans lie in basins that have subsided. The tracts between these two regions of opposite movement may not improbably be specially liable to be affected by stresses, the sudden relief from which will generate earthquakes.—*Archibald Geikie.*

THE LIMITS OF VISION.

If the surface of the earth were a plane, or flat surface, an object would always be visible upon it at a distance only limited by its size, or the strength of the eyesight of the observer, and the power of his telescopes. We know, however, that the surface of the earth is spherical, and, therefore, no matter what the size of an object, at a certain distance—depending upon its height and that of the observer above the surface of the earth—it will become invisible, the convexity of the earth rising up like a wall between them.

The *Popular Science News* remarks that it is often a matter of interest and importance to know how far one can see from any given height, or, conversely, how far one must be above the earth to see an object at a given distance. The exact calculation of these figures would require the use of very complex formulæ, but, for the practical use, two very simple rules will suffice:

The distance in miles at which an object upon the surface of the earth is visible, is equal to the square root of one and a half times the height of the observer in feet above the surface, and conversely.

The height in feet to which the observer must be placed to see a distant object is equal to two-thirds the square of the distance in miles.

For instance: The observer is in the rigging of a ship, 100 feet above the water, how far distant is the horizon? that is, how far could an object floating in the water be visible before being hidden by the convexity of the earth? One and a half 100 is 150, and the square root of 150 is, approximately, twelve and a half, therefore the horizon is twelve and a half miles distant. As the deck of smaller vessels, like pleasure yachts, is rarely more than ten feet above the water, it follows that the limit of vision from that point is less than four miles in every direction.

An illustration of the second rule may be given as follows: A building is thirty-three miles away; how high a hill must one climb in order to be able to see it? As the square of the distance equals 1,089, and two-thirds of that number equals 726, it follows that we must climb a hill 726 feet high before we are able to see the building, even with the most powerful telescope.

Usually, however, the height of the object, as well as that of the observer, must be taken into consideration, but this simply requires the duplications of the problem. For instance: The Washington Monument is 552 feet high; at what height must an observer fifty miles away be in order to see the top of it? Supposing the observer to stand upon the ground, we find by the first rule that he could just see the top twenty-nine miles away, and to overcome the remaining twenty-one miles, due to the convexity of the earth, he would, by rule second, have to climb a height of 294 feet.

Or, suppose a sea captain standing upon the deck of his vessel, thirty feet above the water, can just see the light of a certain lighthouse, which he knows to be 100 feet high; how far is he from it? By using rule first for both heights, and adding the results together, we find that the light is nineteen miles distant from the ship—a piece of information which might be of the highest value. Similar problems will occur to every one.

If we apply similar calculations to the Eiffel Tower, the highest artificial structure in the world, we obtain some interesting results. Assuming the height to be about 1,000 feet, we find that, standing at the top, we enjoy a circle of vision bounded by a horizon thirty-nine miles distant, and that, if another similar tower should ever be erected, it could be placed over seventy-eight miles away before the rays of the electric lights on the summits would be eclipsed by the intervening earth. From the summit of Mt. Everest in the Himalayas (27,000 feet) one could see nearly 200 miles, provided the air was clear enough, which would rarely be the case.

THE New York *Daily News* has copied Mr. Harris's two column story, "The Senses of Fishes," from NATURE, and the Philadelphia *Times* has copied Mr. Bradford's "Hints to Amateurs." NATURE is very popular with the press.

AN editorial in the *Epoch* reads: "NATURE presents a diversified table of contents." This is short, but very sweet. There is a great meaning in the word diversified.

From Key West to Cape Florida, 180 miles, 300,000 cocoanut trees have been planted within the past ten years, and have been found to thrive wonderfully well. Just now in its infancy, while say but one-third of the trees are bearing, the owners ship the crop to the northern markets, but the increased planting will glut those factories along the coast, which will be still more profitable.

B. Greenbaum, United States Consul in Samoa, in a letter to the Merchant's Exchange of San Francisco, says that an island never before reported has been thrown up out of the sea about forty miles off the Tonga Islands, bearing toward the Fiji Islands, in the track of California vessels. The island is two miles long and 250 feet high, and is in latitude 20 deg. 28 min. south, longitude 175 deg. 21 min. west.

ANSWERS TO CORRESPONDENTS.

[NATURE *will fully and cheerfully answer all questions about field sports, angling, guns, ammunition, tackle, natural history and general outing matters. No replies by mail or telegraph.*]

C. W. T.—Sparrows are in season now, fat and in good condition, and beginning to assemble n flocks. Can you give me or your readers some simple directions as to making snares whereby to catch them? They are said to be very good eating.

The approved mode of catching sparrows is to find their roosting places and throw nets over them. Ivy-clad church walls are the very choicest places, but they gather in spruces and on house verandas which are covered with wisteria and honeysuckle. As many as 200 birds have been captured from a church wall at one haul.

INQUIRER.—Some telegraphers say there is no such thing as heat lightning. Often, at the close of a hot day, the phosphorescent shimmer of what is called heat lightnfng is seen in the horizon. Certain telegraphers claim that this is merely the reflection of a storm that is going on somewhere else. One says that at the time they were discussing heat lightning at Gallatin, Miss., heat lightning was visible in the north. He telegraphed to Memphis and found that there a storm was raging with thunder and lightning. He has repeated this experiment at various times, and has settled the matter that there is no such thing as heat lightning, but that where what is called heat lightning is seen there is always a storm raging, but so far away as to be out of hearing.

ANGLER.—The reel of a bait-rod should be on the top side of the rod; that of a fly-rod on the under side.

MILDRED.—The "flicker," "clape," "high-holder" and "yellow-hammer" are simply local names for the golden-winged woodpecker.

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THE STAGE.

Theatre ushers, like street car conductors, take up more room, and make more fuss and noise than their patrons.

* * *

The old-time curtain bell should be done away with. When it is rung for the fall of the curtain on the last act, vulgar members of the audience begin getting up and making a noise in getting out before the finish, much to the disturbance of the more polite individuals.

* * *

It is now said that Edwin Booth and Modjeska resorted to methods for cheap advertising when they recently appeared in court; that the Casino management approved of Mary Halton's runaway marriage as an advertisement, and that James O'Neil's manager gave a poverty-stricken Irish servant girl ten dollars to appear in court and say O'Neil was her husband. Of course these reports would be circulated whether they were true or not. Nowadays anything that may happen to theatrical persons is put down as a free advertisement. It is a great wonder actors are not said to be advertising themselves when they die. *J. Kline Emmet, Jr.*

A few years ago when Steele Mackaye ventilated his plans for the erection of a theatre on Fourth avenue, near Twenty-third street, grave doubts of his sanity were expressed by many of the professional brethren. To-day the Lyceum Theatre ranks second to none in New York. "The Charity Ball," cast to the full strength of the Lyceum stock, is in active rehearsal.

Daniel Frohman stands in the front rank of theatrical managers. Brent Goode has said it. Mr. Frohman is an old newspaper man, and achieves his ends by quiet, easy, unobtrusive methods. Frankness and modesty mark all his intercourses with fellow professionals, and the humblest feel instantly at ease in his presence.

* * *

The "Old Homestead" at the Academy, up to date, has played to larger business than last year. Contracts have already been signed for another season. Its draught is phenominal, and in the way of long runs promises to break all records. No professional begrudges Den Thompson his go l fortune—in fact, they all take a personal pride in it, for Mr. Thompson, by his uniform courtesy and many little acts of kindness, has found a place in the regards of all whose respect is worth having.

* * *

A few weeks ago we dropped in at Niblo's Garden to see Dan Colyer play *Glavis* in the "Lady of Lyons." Henry Jarrett, of the old firm of Jarrett & Palmer, was on the door, representing Augustin Daly's interest in the Terris engagement. It looked like old times—old "Black Crook" times—to see Jarret at his familiar post. Beside him stood Ed. Gilmore, the present lesse. Reminisences were in order. Edward, in those days, took no active part in theatricals. He was studying law—practicing at the bar of the Metropolitan, and numbered among his clients most of the notable men of the day. Times have changed and E. G. Gilmore is now on the top rung of the ladder and a terror to deadheads Mr. Gilmore does not lay himself out to please after the Chesterfieldian method, but his kindness of heart is proverbial, and on more than one occasion has he gone down in his pocket to help a needy actor.

* * *

"The Seven Ages" runs its merry course along at the Standard Theatre. Henry Dixey is the best advertised actor in this country, dividing with Pears' Soap and Sapolio the attention of the American people. While inclined to give the brainy Rice his full share of credit, we will not detract one iota from Dixey's share in this success. J. C. Duff, the manager of the Standard, says that there is every indication of another "Adonis." Mr. Duff is a young magnate distinguished from his fellows by a mania for life insurance policies; he is a dramatic Wannamaker in this respect. With the exception of Charles Frohman, he carries more life insurance than any man in the profession. Mr. Frohman, during the run of "Shenandoah," has a front row of orchestsa chairs blocked off the regular box office sheet; these seats are placed at the disposal of all reputable life insurance agents, free of charge.

* * *

Col. Wm. B. Sinn, manager of the Brooklyn Park Theatre, i the representative magnate from over the bridge. Aside from being a successful man of business, he is respected and appreciated by the actor for numerous professional deeds of kindness and courtesy. The colonel is a gentleman magnate of the old school; would there were many more like him. Cora Tanner, his talented helpmate, is at present playing her customary successful engagement at the Park, appearing in "Fascination."

* * *

The many friends of Manager J. M. Hill will be delighted to hear of his having "struck oil" at last. "The County Fair," as was expected, is a big go, and will be running long after the snow has ceased to fall. Through the many trials and vicissitudes of fortune, Manager Hill has always preserved the same unruffled, manly front.

* * *

In nine cases out of ten a good poker player will invariably make a good "business manager." Frank Sanger and Ed. Knowles are bright illustrations. It is true Louis Aldrich has not done much of late, but he is only resting and will shortly be heard from. Accordidg to the *Sun*, which we quote, he has already commenced preliminary practice. Our worthy contemporary describes Mr. Aldrich as chasing Edwin Booth across the stage, among the wings, up the flies, around the paint frame, down the fire escape, and finally wedging the tragedian in an angle of the property room and there presenting him with the "insignia of the diamond belt of the Actors' Order of Friendship." Yet Louis Harrison has irreverently coupled Aldrich's name with "crape on the door bell of the drama." Simply a case of professional malice.

* * *

One of our rising young native dramatists, who holds daily levies in chambers at the Continental Hotel, but whose extreme modesty has hitherto kept him in the background, will shortly be heard from.

* * *

The "Booth and Modjeska Combination" at the Broadway is the society event of the season. Manager Frank Sanger, of this house, is an able exponent of the brainy theatrical magnate.

* * *

M. B. Leavitt, Harry Miner and T. Henry French are brilliant representatives of the shrewd theatrical business man. Mr. French is the wealthiest, Leavitt the keenest and Miner the most prudent of the trio. Messrs. Miner and French were at one time prominent officers of the Actors' Fund, until the urgent demands of outside business made it imperative for them to resign. The Actors' Fund, by the bye, is doing yeoman's service for the needy professional—doing it in a quiet, unostentatious way. An incident, which has a touch of pathos in it, is cited as being one of the many little acts of benevolence performed by this institution. Some years ago a veteran showman was presenting a repertoire of ancient tragedies out in the far west; his favorite part was "Metamora." While impersonating this character in Cheyenne territory he was struck by a brick. The missile, sent with true, unerring aim, removed the scalp from the actor's head as clean as the blow of a scalping knife. The unfortunate man, broken down in spirit, a physical wreck, unqualified for professional duties, walked back to New York, wandered into the Fund rooms, and there narrated his sad tale to Uncle Ben Baker, the custodian of the funds. Now this veteran showman was a man of independent spirit and refused to accept charity in the rough, so Uncle Ben partitioned off a little space in the corner of the rooms and installed the veteran as a full-fledged dramatic agent. Of course the position was only a sinecure, and the performers, to keep up the deception, used to drop in and go through the forms incidental to applications for engagements.

* * *

An eastern manager, whose original sayings have made him famous and whose experience entitles him to a respectful hearing, once made the remark "that it cost money to run a theatre in New York." While this is an incontestable fact, there is another factor more powerful even than money, and that is *brains*. At no time in the history of the American stage has such a collection of brainy men stood at the managerial helm of the Metropolitan drama. When we consider what mental powers are demanded to conduct a successful theatrical enterprise—that it demands sound judgment, precise adaption of means to ends, great energy, promptness of decision and action in emergencies, skill in organizing and tact in managing artists, as well as many minor qualities, we shall conclude that the consummate theatrical magnate has no "cinch."

* * *

The "Great Unknown" at Daly's Theatre is running along smoothly to the usual Daly *clientele*. While not a pronounced hit, it is a slight improvement on its predecessor. Neither of these plays have satisfied the expectations of the manager, but Mr. Daly is one of the *brainy* magnates with a surprise in reserve, never to be caught empty-handed. Rehearsals of "As You Like It" are progressing rapidly. There is a Shakspearian treat in store for the patrons of this house, for the management promise a production of the play which will outshine anything of the kind ever witnessed in this country. For ardor and earnestness in his work, Mr. Daly stands out conspicuous among his peers. He is a busy man with no time for triflers A reporter once tried to interview him during a rehearsal. The manager addressed the reporter as follows: "My time is money and he who robs me of it does me as great an injury, so far as loss of property is concerned, as if he had picked my pocket, or paid me with counterfeit bills. Whether a man steals from me a dollar, or the half hour in which I can earn that sum, is to me a matter of indifference. The former crime may be the more demoralizing to you, but my loss is as great in one case as the other." Mr. Dorney then entered and swept up the remains of the newspaper man.

* * *

Manager A. M. Palmer is giving the pubic a taste of exquisite English comedy at both houses—Agnes Booth and an American company at the Madison Square Theatre, Chas. Wyndam and an English company at Palmer's. Comparisons are odious, nevertheless a feeling of patriotic exhilaration compels us to smile. Previous to joining the ranks of theatrical magnates, Mr. Palmer, in literary circles, was considered a man of æsthetic tastes and scholarly methods. These characteristics are made manifest in all his recent successes.

* * *

There are many bright and brainy theatrical business men of whom it would be a pleesure to speak did space permit, men who would make a pecuniary success in any walk of life.

Toby Twinkle.

It is perhaps natural, from a business point of view, that New York managers should prefer beaten paths. If London, or Paris, or Vienna, had a London, or Paris, or Vienna, to look to for tried and accomplished popular successes, no doubt their managers would be less venturesome. It is, perhaps, too much to expect that our managers should encourage home talent when at best it involves a risk, while they have but to pick and choose from foreign fields for certainties ready-made and waiting for production. It is not necessary for a manager to know a word of French or German. As James Gordon Bennett, Sr., used to say, "One can always buy brains at ten or fifteen dollars a week." We know a manager, and doubtless he is not alone in the practice, who receives regularly a translation of everything that appears at the leading theatres of Paris, Berlin and Vienna. Many of them are never used, at least in entirety. But it would surprise the average citizen could he learn how much of a hodge-podge many of the so-called "adaptations" are. The authors of many pieces would have some difficulty in recognizing their bantlings so greatly have they been changed by the second-hand author, commonly called the adapter. We have known a play to be a perfect hybrid, its component parts taken from three or four different languages, say French, German and Italian, or Spanish, with a little bit of American thrown in for seasoning. And we have known such a *pot-pourri* to run for six months, too. When the millenium comes, perhaps, the native author will receive more consideration.

* * *

You know Tony Pastor invented Lilliaa Russell. He is very shrewd in discovering "taking" cards. He can hardly be said to have invented Bessie Bonehill, because she *is* a London favorite. But there is no use denying that Bessie Bonehill is a genius in her way. Emily Rigle was only a dancer once, and though Bessie Bonehill is now a variety actress, the time is coming when she can get her own terms in the legitimate, as the higher branches of comedy are called. Meantime the Union Club men are whistling the airs of her songs.

* * *

There is a somewhat wide-spread impression among those who do not know the facts in the case, that an actor's life is wild and irregular, that the members of the profession are given to all kinds of dissipation and excesses. Just the contrary is true. How in the world is an actor to play, as many do, 200 or 300 nights in the year if he leads an irregular life? Have the calumniators of the dramatic art ever heard of such things as nerves? Do they suppose that an actor can break every known law of hygiene and yet come up smiling before the footlights in good trim every night? Do they not know that an actor broken in health is at once shelved as of no earthly use? Or do they imagine that actors have nerves of steel and are not subject to the ordinary laws of health? We venture to assert that actors are as regular in their habits of life as members of any other guild. We know personally, for example, an actor fifty years of age who has never been late at a performance or rehearsal, and who has never been fined for misconduct or dereliction of duty. What "business man" can show this record?

* * *

Our German friends are enthusiastic over Possart's acting at the Amberg. By the way, there is no better lesson in a foreign tongue than to go and hear an acknowledged master like Possart, whose reading is excellent and whose accent is flawless. Are there not enough Frenchmen in town to run a French theatre?

* * *

The Eden Musée is with us the year round, and ought to be visited by every man, woman and child in New York. In fact, it is about the only entertainment at present which gives the young folks "a show." *C. C. Starkweather.*

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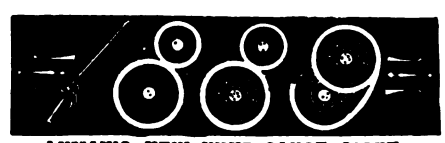

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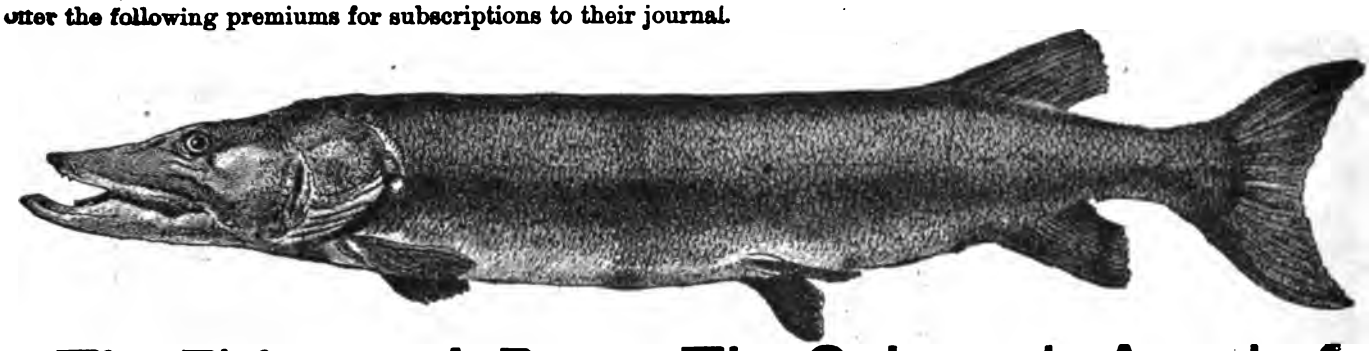

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